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TEST REPORT
IEC/EN 60335-2-15
Safety of household and similar electrical appliances
Part 2: Particular requirements for appliances for heating liquids

Report Reference No. ..... :	130229
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Address .....:	Unit 1-5, 15/F, CCT Telecom Building, No. 11 Wo Shing Street, Fotan, Shatin, N.T., Hong Kong
Applicant's name ..... :	China Hangyu Group Co., Ltd.
Address ..... :	No.16 Beihu Road, Economic Development Zone, Yongkang, Zhejiang, China
Test specification:	
Standard ..... :	☒ EN 60335-2-15:2002+A1:2005 + A2:2008 with ☒ EN 60335-2-14:2006 +A1:2008 with ☒ EN 60335-1:2002+A1:2004+A11:2004+A2:2006+A12:2006 +A13:2008 ☒ EN 50366:2003+A1:2006
Test procedure ..... :	GS
Non-standard test method..... :	N/A
Test Report Form No. ..... :	IEC60335_2_15E
Test Report Form(s) Originator ..... :	IMQ S.p.A.
Master TRF ..... :	Dated 2008-01

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Test item description .....:	Coffee maker
Trade Mark ..... :	HYCO
Manufacturer ..... :	China Hangyu Group Co., Ltd.
Model/Type reference ..... :	HES120A
Ratings ..... :	220-240V~ 50Hz 1400W; Class I

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Name and address of production-sites (Factories):

China Hangyu Group Co., Ltd.

No.16 Beihu Road, Economic Development Zone, Yongkang, Zhejiang, China

Copy of marking plate:

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Summary of testing:

This appliance mainly function is for brewing coffee, and one coffee mill is also incorporated with the appliance. So EN 60335-2-14 is also considered in the appendix 4.

EMC standards

EN 55014-1:2006

EN 55014-2:1997 + A1:2001+ A2:2008

EN 61000-3-2:2006

EN 61000-3-3:1995 + A1:2001+ A2:2005

EMF standard

EN 50366:2003 + A1:2006

List of attachments:

APPENDIX 1: includes the assessment of all group differences and national deviations to IEC60335-1 and IEC 60335-2-15;

APPENDIX 2: includes the test result of EMF;

APPENDIX 3: includes the assessment according to EN 60335-2-15:2002 / A2:2008;

APPENDIX 4: includes the assessment according to EN 60335-2-14:2006 +A1:2008;

APPENDIX 5: Photos Document

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Test item particulars ..... :	Coffee Maker
Classification of installation and use ..... :	Portable appliance
Supply Connection ..... :	Supply cord with plug
..... :	
..... :	
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)
Testing ..... :	
Date of receipt of test item ..... :	2009-09-01
Date (s) of performance of tests ..... :	2008-09-02 to 2009-11-03

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

General product information:

Marking label, user manual, packing text:
Instructions and marking shall be in a language acceptable for the country where the equipment is to be used.

Mains plug:
If the equipment shall be used with a special mains plug which is not listed in the component list (e.g. United Kingdom), samples of the modified product must be subject to a test according to the relevant clauses of the product standard.

Other product properties:
Depending on the country where the equipment is to be used, national deviations may be considered. Samples of the modified product may be tested again according to relevant clauses of the product standard, modified by national deviations.

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
5	GENERAL CONDITIONS FOR THE TESTS		
	Tests performed according to cl. 5, e.g. nature of supply, sequence of testing, etc.		P
5.2	See Note (IEC 60335-2-15)		N/A
5.3	The test of 19.101 is made after other tests (IEC 60335-2-15)		N/A
6	CLASSIFICATION		
6.1	Protection against electric shock: Class 0, 0I, I, II, III .....:	Class I	P
6.2	Protection against harmful ingress of water		N/A
	Wash boilers and livestock feed boilers shall be at least IPX3 (IEC 60335-2-15)		N/A
7	MARKING AND INSTRUCTIONS		
7.1	Rated voltage or voltage range (V).....:	220-240V	P
	Nature of supply .....:	~	P
	Rated frequency (Hz).....:	50Hz	P
	Rated power input (W) .....:	1400W	P
	Rated current (A) .....:		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark .....:	Trademark: HYCO	P
	Model or type reference .....:	HES120A	P
	Symbol 5172 of IEC 60417, for Class II appliances		N/A
	IP number, other than IPX0 .....:	IPX0	N/A
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains		N/A
	Appliances intended to be partially immersed in water for cleaning, shall be marked with the maximum level of immersion, and (IEC 60335-2-15)		N/A
	with the substance of the following: "Do not immerse beyond this level" (IEC 60335-2-15)		N/A

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	For kettles : level mark which indicate the rated capacity (IEC 60335-2-15)		N/A
	Unless they cannot be filled beyond their rated capacity (IEC 60335-2-15)		N/A
	Mark outside of the kettle if the level is not self evident (IEC 60335-2-15)		N/A
	Marking on the appliance of the closed position of the lid of pressure cooker if it is not obvious (IEC 60335-2-15)		N/A
	Identification mark and Model or type reference of stand for cordless kettles (IEC 60335-2-15)		N/A
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen	220-240V	P
	Different rated values marked with the values separated by an oblique stroke		N/A
7.4	Appliances adjustable for different rated voltages, the voltage setting is clearly discernible		N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N/A
	the power input is related to the arithmetic mean value of the rated voltage range		P
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.6	Correct symbols used		P
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		P
	- marking of terminals exclusively for the neutral conductor (N)		N/A

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	- marking of protective earthing terminals (symbol 5019 of IEC 60417)		P
	- marking not placed on removable parts		P
7.9	Marking or placing of switches which may cause a hazard		N/A
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means .....:	By the characters & picogram near to the knob; and the LED indicators;	P
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N/A
7.11	Indication for direction of adjustment of controls		N/A
7.12	Instructions for safe use provided		P
	The instructions state that:		P
	- the appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction		P
	- children being supervised not to play with the appliance		P
	Appliance with inlet and intended to be immersed for cleaning: instruction sheet including in substance : (IEC 60335-2-15)		N/A
	- remove connector before cleaning		N/A
	- dry appliance inlet before re-use		N/A
	The instructions for use for appliances intended to be used with a connector incorporating a thermostat, shall state that only the appropriate connector must be used		N/A
	Unless, kettles are constructed so that a hazard cannot arise from boiling water being ejected, the instructions for use shall include the substance of the following:		N/A
	- if the kettle is overfilled, boiling water may be ejected		N/A
	The instructions for use for kettles filled through a lid aperture which is situated below the handle, shall include the substance of the following warnings :		N/A
	Warning: "Position the lid so that steam is directed away from the handle"		N/A

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	Warning: "Do not remove the lid while the water is boiling"		N/A
	Cordless kettles :		N/A
	- the instructions for use for cordless kettles shall state that the kettle is only to be used with the .....stand provided		N/A
	- if the kettle and stand of cordless kettles can be lifted together by gripping the handle of the kettle, the instructions for use shall include the substance of the following: "Caution - Ensure that the kettle is switched off before removing it from its stand"		N/A
	The instructions for use for feeding bottle heaters shall state :		N/A
	- that the food should not be heated for too long a period		N/A
	- how to check that the correct food temperature has not been exceeded		N/A
	The instructions for use for appliances normally cleaned after use and not intended to be immersed in water for cleaning, shall state that the appliance must not be immersed		P
	Pressure cooker :		N/A
	The instructions for use for pressure cookers, shall state that the ducts in the pressure regulator allowing the escape of steam should be checked regularly to ensure that they are not blocked		N/A
	They shall also give details of how to open the container safely, and		N/A
	state that the container must not be opened until the pressure has decreased sufficiently		N/A
	The instructions for use for egg boilers provided with a pricking device shall contain the substance of the following :		N/A
	Caution: "Avoid injuries from the egg pricker"		N/A
	For espresso coffee-makers incorporating a pressurized reservoir filled by the user, the instructions shall contain information for the safe refilling of the water reservoir and the substance of the following: (A1:2005)	No pressurized reservoir	N/A
	WARNING: The filling aperture must not be opened during use		N/A

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
7.12.1	Sufficient details for installation supplied		N/A
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		N/A
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions stating that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		N/A
	- dimensions of space		N/A
	- dimensions and position of supporting means		N/A
	- distances between parts and surrounding structure		N/A
	- dimensions of ventilation openings and arrangement		N/A
	- connection to supply mains and interconnection of separate components		N/A
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N/A
	a switch complying with 24.3		N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		P
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Caution in the instructions for heating appliances with a non-self-resetting thermal cut-out		N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N/A
7.12.8	Instructions for appliances connected to the water mains:		N/A
	- max. inlet water pressure (Pa).....:		N/A
	- min. inlet water pressure, if necessary (Pa).....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N/A
7.13	Instructions and other texts in an official language	English and German instruction manuals are checked	P
7.14	Marking clearly legible and durable		P
7.15	Marking on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool		N/A
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N/A
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032: no contact with live parts		P
8.1.2	Use of test probe 13 of IEC 61032 through openings in class 0 appliances and class II appliances/ constructions: no contact with live parts		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts		N/A
	See Note (IEC 60335-2-15)	Connecting device for coffee mill is checked	P
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032: no contact with live parts of visible glowing heating elements		N/A
8.1.4	Accessible part not considered live if:		N/A
	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V		N/A
	- safety extra-low d.c. voltage: not exceeding 42.4 V		N/A
	- or separated from live parts by protective impedance		N/A
	If protective impedance: d.c. current not exceeding 2 mA, and		N/A
	a.c. peak value not exceeding 0.7 mA		N/A
	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 μF		N/A
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 μC		N/A
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		N/A
	- built-in appliances		N/A
	- fixed appliances		N/A
	- appliances delivered in separate units		N/A
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
9	STARTING OF MOTOR-OPERATED APPLIANCES		

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	This clause of part 1 is not applicable (IEC 60335-2-15)		N/A
10	POWER INPUT AND CURRENT		
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1	(see appended table)	P
	Test for an appliance with one or more rated voltage ranges		P
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2		N/A
	Test for an appliance with one or more rated voltage ranges		N/A
11	HEATING		
11.1	No excessive temperatures in normal use	Coffee mill tested in the APPENDIX 4	P
11.2	Placing and mounting of appliance as described		P
	Portable appliances are tested away from the walls of the test corner (IEC 60335-2-15)		P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		N/A
	the windings makes it difficult to make the necessary connections	The winding of water pump motor	P
11.4	Heating appliances operated under normal operation at 1.15 times rated power input .....:	1753W (255,0V)	P
	If the temperature rise limits are exceeded in appliances incorporating motors, transformers or electronic circuits and if the power input is lower than the rated power input, the test is repeated with the appliance supplied at 1,06 times rated voltage (IEC 60335-2-15)		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage .....:		N/A

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage .....:		N/A
	Combined appliances are tested as heating appliances (IEC 60335-2-15)		P
11.7	Appliances are operated for the duration specified in 11.7.101 to 11.7.105 (IEC 60335-2-15)		P
11.7.101	For kettles with temperature limiter : test terminated after second operation of temperature limiter		N/A
	For kettles with thermostat : test terminated 15 min after the water has attained 95° C and 5 min after for others kettles		N/A
11.7.102	For cooking pans, egg boilers, feeding-bottle heaters, glue pots, livestock feed boilers, milk heaters, sterilizers, wash boilers and for appliances that boil water other than kettles, the fest is terminated: (A1:2005)		N/A
	- appliances without a thermal control, 15 min after the water in the container has attained a temperature of 95 °C or the maximum temperature it can attain if this is lower		N/A
	- portable appliances : 15 min after the thermal control has operated for the first time		N/A
	- fixed appliances : 30 min after the thermal control has operated for the first time		N/A
	- appliances with acoustic signal : 1 min after signal		N/A
	For appliances having heated surface for keeping the liquid warm : also until steady conditions with and without the container		N/A
11.7.103	Slow cookers, steam cookers and yoghurt makers are operated until steady conditions are established		N/A
	Slow cookers are prewarmed in the dry state if this instruction is given		N/A
11.7.104	Espresso coffee-makers are operated in accordance with the instructions for use		P
	Espresso coffee-makers having an outlet for supplying steam or hot water, before each rest period the brewing period is immediately followed by a period during which the steam or water is supplied for the time indicated in the instructions		P

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	Espresso coffee-makers operated until steady conditions		P
11.7.105	Pressure cookers operated 15 min after attaining the maximum cooking pressure		N/A
11.8	Temperature rises not exceeding values in table 3	(see appended tables)	P
	Sealing compound does not flow out		P
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
	When an appliance connector incorporates a thermostat, the temperature rise limit for the pins of the inlet does not apply (IEC 60335-2-15)		N/A
	The temperature rise limits of motors, transformers, components of electronic circuit and parts directly influenced by them may be exceeded when the appliance is operated at 1,15 times rated power input (IEC 60335-2-15)		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1.15 times rated power input .....:		N/A
	Motor-operated appliances and combined appliances supplied at 1.06 times rated voltage .....:	254,4V	P
	Protective impedance and radio interference filters disconnected before carrying out the tests		P
13.2	Leakage current measured by means of the circuit described in figure 4 of IEC 60990		P
	Leakage current measurements	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4	(see appended table)	P
	No breakdown during the tests		P
14	TRANSIENT OVERVOLTAGES		

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliances withstand the transient overvoltages to which they may be subjected		N/A
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6		N/A
	No flashover during the test, unless of functional insulation		N/A
	In case of flashover of functional insulation, the appliance complies with clause 19 with the clearance short circuited		N/A
15	MOISTURE RESISTANCE		
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance	IPX0	N/A
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N/A
	No trace of water on insulation which can result in a reduction of clearances and creepage distances below values specified in clause 29		N/A
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529 .....:		N/A
	Water valves in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube		N/A
	However, for appliances normally used on the floor or table, the movement is limited to two times 90° for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N/A
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support		N/A
	For IPX4 appliances, the movement of the tube is limited to two times 90° from the vertical for a period of 5 min		N/A
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts tested as specified		N/A
15.2	Spillage of liquid does not affect the electrical insulation		P
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A
	Detachable parts removed		P
	Overfilling test with additional amount of water, over a period of 1 min (l) .....:	0,25 l	P
	The appliance withstands the electric strength test of 16.3		P
	No trace of water on insulation that can result in a reduction of clearances and creepage distances below values specified in clause 29		P
	The test is only carried out with the appliance connector in position (IEC 60335-2-15)	Connecting device for coffee mill checked	P
	spillage tests with a deviation (°) from the normal position:	5°	P

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	Steam sterilizers : particular overfilling test in conditions as specified (A1:2005)		N/A
	Cordless kettles : particular overfilling test in conditions as specified (A1:2005)		N/A
	Kettles : particular overfilling test in conditions as specified (A1:2005)		N/A
15.101	Appliances to be immersed in water for cleaning sufficiently protected against effects of immersion		N/A
	Testing conditions and scheduling as specified		N/A
	No trace of water on insulation which can result in reduction of creepage distances and clearance below values specified in 29		N/A
15.102	Cordless kettles : particular electric strength test in conditions as specified		N/A
	Stand withstanding the test of 16.3 with voltage reduced to 2500 V for reinforced insulation		N/A
15.3	Appliances proof against humid conditions		P
	Humidity test for 48 h in a humidity cabinet	25°C; 95%	P
	The appliance withstands the tests of clause 16		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		N/A
16.2	Single-phase appliances: test voltage 1.06 times rated voltage.....:	254,4V	P
	Three-phase appliances: test voltage 1.06 times rated voltage divided by √3 .....:		N/A
	Leakage current measurements	(see appended table)	P
16.3	Electric strength tests according to table 7	(see appended table)	P
	No breakdown during the tests		P
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use		N/A

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	Appliance supplied with 1.06 or 0.94 times rated voltage and the most unfavourable short-circuit or overload likely to occur in normal use applied.....:		N/A
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K		N/A
	Temperature of the winding not exceeding the value specified in table 8,		N/A
	however limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A
18	ENDURANCE		
	This clause of part 1 is not applicable (IEC 60335-2-15)		N/A
19	ABNORMAL OPERATION		
19.1	The risk of fire or mechanical damage under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N/A
	Kettles are not subjected to the test of 19.2 (IEC 60335-2-15)		N/A
	Kettles checked by 19.101, unless the appliance incorporates a non-self resetting thermal cut-out (IEC 60335-2-15)		N/A
	Kettles compliance with 19.101 relies on the operation of a self resetting thermal cut-out are subjected 19.102 (IEC 60335-2-15)		N/A
19.2	Test of appliance with heating elements with restricted heat dissipation; test voltage (V): power input of 0.85 times rated power input .....:	217V; 1089W	P
	Appliances are placed as near as possible to the walls of the test corner (IEC 60335-2-15)		P
	They are tested empty with lids open or closed whichever is the more unfavourable (IEC 60335-2-15)	No lid	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
19.3	Test of 19.2 repeated; test voltage (V): power input of 1.24 times rated power input .....:	264V; 1890W	P
	Kettles are operated empty at 1.15 times rated power input (IEC 60335-2-15)		N/A
	The test is carried out with the kettle filled with sufficient water to cover the heating element or if the heating element is not positioned inside the container, to a depth of 10 mm : (IEC 60335-2-15)		N/A
19.4	Test conditions as in cl. 11, any control limiting the temperature during tests of cl. 11 short-circuited		P
	Pressure regulators of pressure cookers are rendered inoperative together with each protective device in turn (IEC 60335-2-15)		N/A
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the elements sheath		P
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		P
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		N/A
	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures		N/A
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque or locking moving parts of other appliances		P
	Locked rotor, motor capacitors open-circuited or short-circuited, if required		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Test repeated with capacitors short-circuited one at a time, if required		N/A
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed		N/A
	Other appliances supplied with rated voltage for a period as specified		N/A
	Espresso coffee-makers are operated for a period of 5 min (IEC 60335-2-15)		P
	Winding temperatures not exceeding values specified in table 8	(see appended table)	P
19.8	Three-phase motors operated at rated voltage with one phase disconnected		N/A
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		N/A
	Winding temperatures not exceeding values as specified		N/A
19.10	Series motor operated at 1.3 times rated voltage for 1 min .....:	Coffee mill tested in Appendix 4	N/A
	During the test, parts not being ejected from the appliance		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless they comply with the conditions specified in 19.11.1		P
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.3 and 19.11.4		N/A
	Appliances having a switch with an off position obtained by electronic disconnection, or a switch placing the appliance in a stand-by mode, subjected to the tests of 19.11.4	Not possible unsafe operation	P
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8		N/A
19.11.1	Before applying the fault conditions a) to f) in 19.11.2, it is checked if circuits or parts of circuit meet both of the following conditions:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified	After T4(78L05)	P
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction in other parts of the appliance does not rely on the correct functioning of the electronic circuit		P
19.11.2	Fault conditions applied one at a time, the appliance operated under conditions specified in cl. 11, but supplied at rated voltage, the duration of the tests as specified:		P
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in 29		N/A
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless they comply with IEC 60384-14		P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits. This fault condition is not applied between the two circuits of an optocoupler		P
	e) failure of triacs in the diode mode		P
	f) failure of an integrated circuit		P
	g) failure of an electronic power switching device		P
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to f) of 19.11.2		N/A
	During and after each test the following is checked:		P
	- the temperature rise of the windings do not exceed the values specified in table 8		P
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided all three of the following conditions are met:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- the material of the printed circuit board withstands the burning test of annex E		N/A
	- any loosened conductor does not reduce the clearances or creepage distances between live parts and accessible metal parts below the values specified in cl. 29		N/A
	- the appliance withstands the tests of 19.11.2 with open-circuited conductor bridged		N/A
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		P
	a device that can be placed in the stand-by mode,		N/A
	subjected to the tests of 19.11.4.1 to 19.11.4.7	Not possible unsafe operation	P
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, except that		N/A
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		N/A
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4		P
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3		P
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified		P
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		P
	Earthed heating elements in class I appliances disconnected		P
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		P
19.11.4.6	The appliance is subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000-4-11		P

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Clause	Requirement + Test	Result - Remark	Verdict
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		P
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60s the power supply is reduces to a level such that the appliance ceases to respond or a programmable component cease to operate.		P
	The appliance continues to operate normally or requires a manual operation to restart		P
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A).....:	>30A; 10A	P
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9	(see appended table)	P
	Compliance with cl. 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		N/A
	Insulation, other than of class III appliance, withstand the electric strength test of 16.3, the test voltage specified in table 4:		P
	- basic insulation.....:	1000V	P
	- supplementary insulation.....:		N/A
	- reinforced insulation.....:	3000V	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstanding the electric strength test of 16.3. the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		P
	- do not become operational, or		P
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		P
	During the test of 19.4, pressure relief devices of pressure cookers operate before pressure has reached 350 kPa (IEC 60335-2-15)		N/A
19.14	Appliances operated under the conditions of Clause 11. Contactors or relays contacts operating under the conditions of clause 11 short-circuited		N/A
19.101	Kettle operated empty at 0,85 times or 1,15 times rated power input, whichever is more unfavourable, thermal cut-out rendered inoperative		N/A
	Any flames keep within the enclosure of the kettle and supporting surface does not ignite		N/A
19.102	Test with one of the thermal cut-outs rendered inoperative, carried out 100 times		N/A
19.103	Appliances with detachable liquid containers : automatic transfer of liquid from one container to another is liable and safe	Only one detachable liquid container	N/A
	One cycle operation with liquid container and pipes incorrectly positioned or removed		N/A
	Electric strength test		N/A
	No trace of water on insulation which can result in reduction of creapage distance and clearance below values specified in 29.1		N/A
20	STABILITY AND MECHANICAL HAZARDS		
20.1	Adequate stability		P
	Tilting test through an angle of 10° (appliance placed on an inclined plane/horizontal plane); appliance does not overturn		P
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15°		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury	Coffee mill tested in the APPENDIX 4	P
	Protective enclosures, guards and similar parts are non-detachable		P
	Adequate mechanical strength and fixing of protective enclosures		P
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, by unexpected reclosure		N/A
	Not possible to touch dangerous moving parts with test probe		P
21	MECHANICAL STRENGTH		
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P
	Checked by applying blows to the appliance in accordance with test Ehb of IEC 60068-2-75, spring hammer test, impact energy 0,5 J		P
	If necessary, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
	See Note (IEC 60335-2-15)		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	The insulation is tested as specified, unless		N/A
	the thickness of supplementary insulation is at least 1 mm and reinforced insulation is at least 2 mm	Min. thickness of enclosure: 2,9mm	P
22	CONSTRUCTION		
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled		N/A
22.2	Stationary appliance: means to provide all-pole disconnection from the supply provided, the following means being available:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- a supply cord fitted with a plug		N/A
	- a switch complying with 24.3		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided		N/A
	- an appliance inlet		N/A
	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Pull force of 50N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating unless rotating does not impair compliance with the standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		P
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance exceeding 0,1μF, the appliance being disconnected from the supply at the instant of voltage peak		P
22.6	Electrical insulation not affected by condensing water or leaking liquid		P
	Electrical insulation of Class II appliances not affected in case of a hose rupture or seal leak		P
	Drain holes shall be at least 5 mm in diameter or 20 mm² in area with a width of at least 3 mm (IEC 60335-2-15)	705 mm² in area with a width of 4,7mm	P

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Clause	Requirement + Test	Result - Remark	Verdict
22.7	Adequate safeguards against the risk of excessive pressure in appliances provided with steam-producing devices		N/A
	Additional test for espresso coffee-maker : (IEC 60335-2-15)		N/A
	Max. pressure obtained with coffee filter blocked and any steam valve closed; test 5 min with twice this max. pressure :	No pressure container	N/A
	No rupture, no abnormal leakage; appliance fit for further use		N/A
	Max. pressure test with pressure limiting devices made ineffective		N/A
	No explosion nor emission of dangerous jets of steam		N/A
	Last test repeated in case of rupture of an intentionally weak part: the appliance shall be terminated in the same mode		N/A
	Pressure cooker test with six times the max. nominal cooking pressure		N/A
	No rupture of container		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		N/A
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances		P
	Adequate insulating properties of oil or grease to which insulation is exposed		N/A
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance		N/A
	Non-self resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Location or protection of reset buttons of non-self-resetting controls is so that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts		P
	Obvious locked position of snap-in devices used for fixing such parts		P
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P
	Tests as described		P
22.12	Handles, knobs etc. fixed in a reliable manner		P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied	Function selection knob	P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		N/A
22.13	Unlikely that handles, when gripped as in normal use, make the operators hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		P
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self tapping screws etc., liable to be touched by the user in normal use or during user maintenance		P
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands, no undue wear of contacts		N/A
	Cord reel tested with 6000 operations, as specified		N/A

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner		N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion under normal conditions of use		P
22.19	Driving belts not used as electrical insulation		N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless material used is non-corrosive, non-hygroscopic and non-combustible		N/A
	Compliance is checked by inspection and, if necessary, by appropriate test		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless impregnated		N/A
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		P
22.22	Appliances not containing asbestos		P
22.23	Oils containing polychlorinated biphenyl (PCB) not used		N/A
22.24	Bare heating elements adequately supported		N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		N/A
22.25	Sagging heating conductors cannot come into contact with accessible metal parts		N/A
22.26	The insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation		N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation		N/A
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water: separated from live parts by double or reinforced insulation		N/A

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		P
22.31	Clearances and creepage distances over supplementary and reinforced insulation not reduced below values specified in clause 29 as a result of wear		P
	Clearances and creepage distances between live parts and accessible parts not reduced below values for supplementary insulation, if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation designed or protected against deposition of dirt or dust		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar material or beads alone not used as supplementary or reinforced insulation		N/A
	Oxygen bomb test at 70 °C for 96 h and 16 h at room temperature		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation and not reinforced insulation		P
22.33	Conductive liquids that are or may become accessible in normal use are not in direct contact with live parts		P
	Electrodes not used for heating liquids	No electrodes	P
	For class II constructions, conductive liquids that are or may become accessible in normal use, not in direct contact with basic or reinforced insulation		P

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Clause	Requirement + Test	Result - Remark	Verdict
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless the shaft is not accessible when the part is removed		P
22.35	Handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances other than those of electrical components, provided they are either reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
22.36	Handles continuously held in the hand in normal use are so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in Class II appliances not connected to accessible metal parts, unless complying with 22.42		N/A
	Metal casings of capacitors in Class II appliances separated from accessible metal parts by supplementary insulation, unless complying with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		N/A
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Unless the appliance can operate continuously, automatically or remotely without giving rise to a hazard, appliances for remote operation being fitted with a switch. The actuating member of the switch being easily visible and accessible.		N/A
22.41	No components, other than lamps, containing mercury		P
22.42	Protective impedance consisting of at least two separate components		N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur		N/A
22.44	Appliances shall not have an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.4 due to deformation as a result of an external force applied to the enclosure		P
22.46	Software used in protective electronic circuits is software class B or C .....:		N/A
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non-potable water		N/A
22.49	For remote operation, the duration of operation shall be set before the appliance can be started, unless		N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	A control on the appliance being manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	Manual setting and visual indication not necessary on appliances that can operate as follows, without giving rise to a hazard:		N/A
	- operate continuously,		N/A
	- operate automatically, or		N/A
	- be operated remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A
22.101	Kettles shall be constructed so that the lid does not fall off when water is poured out		N/A
22.102	Kettles so constructed that there are no sudden jets of steam or hot water likely to expose the user to a hazard when the appliance is used as in normal use		N/A
22.103	Appliance coupler of cordless kettles shall be constructed to withstand the stresses occurring during normal use	Connecting device for coffee mill is checked	P
	Additional test for cordless kettles	Connecting device for coffee mill is checked	P
	The kettle is inserted into and withdrawn from the stand 10 000 times (1,1 times the rated current) (10 times per min)	0,39A (the rated current for coffee mill is 0,35A at 240V)	P
	The test is continued for a further 10 000 times without current flowing	Connecting device for coffee mill is checked	P
	The kettle shall be fit for further use and compliance with 8.1, 16.3, 27.5 and 29.1 shall not be impaired	Connecting device for coffee mill is checked	P
22.104	Portable appliance in which water boil with a container greater than 3 l is filled to its rated capacity with the lid closed in accordance with instructions for use		N/A
	The plane is slowly inclined to an angle of 25 ° ; if the appliance overturns, it is left in this position for 10 s and then returned to its normal position		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The rate of discharge of liquid does not exceed 16 l/min		N/A
22.105	Fixed appliances for boiling water		N/A
	Container always open to the atmosphere		N/A
	Drain hole: diameter 5 mm, or area 20 mm² with a width 3 mm		N/A
	Aperture not likely to be obstructed in normal use		N/A
	If the appliance has provisions for discharging steam or water overflowing, the discharge aperture shall be at the base of the appliance and shall discharge vertically downwards		N/A
22.106	Espresso coffee-maker: impossible to remove the filter by a simple operation while hazardous pressure within the container	No hazardous pressure within container	N/A
22.107	Pressure cookers shall incorporate a non-self-resetting pressure or temperature responsive pressure relief device		N/A
22.108	Pressure cooker: not possible to remove the lid when the inner pressure is excessive		N/A
	Pressure test at 4 kPa and 100 N		N/A
	No hazardous displacement of lid at removal		N/A
22.109	Feeding-bottle heater: visible or audible signal to indicate the end of the heating period		N/A
22.109	Kettles constructed so that they are no sudden jets of steam or hot water likely to expose the user to a hazard		N/A
22.110	Espresso coffee-makers, incorporating a pressurized reservoir filled by the user, shall be constructed so that there is no spillage of water or sudden jets of steam or hot water (A1:2005)		N/A
	When removing the filling cap of the pressurized reservoir, before the cap is removed completely, the pressure shall be relieved in a controlled manner (A1:2005)		N/A
	Compliance is checked by inspection during the test (A1:2005)		N/A
23	INTERNAL WIRING		

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IEC 60335-2-15			
Clause	Requirement + Test	Result - Remark	Verdict
23.1	Wireways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts		N/A
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges or corners		N/A
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		N/A
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use or 100 flexings for conductors flexed during user maintenance		N/A
	Electric strength test, 1000 V between live parts and accessible metal parts		N/A
23.4	Bare internal wiring sufficiently rigid and fixed		N/A
23.5	The insulation of internal wiring withstanding the electrical stress likely to occur in normal use		P
	No breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by positive means		N/A
23.7	The colour combination green/yellow used only for earthing conductors		P
23.8	Aluminium wires not used for internal wiring		P

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Clause	Requirement + Test	Result - Remark	Verdict
23.9	No lead-tin soldering of stranded conductors where they are subject to contact pressure, unless		P
	clamping means so constructed that there is no risk of bad contact due to cold flow of the solder		N/A
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
24	COMPONENTS		
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components	(see appended table)	P
	Components not tested and found to comply with relevant IEC standard for the number of cycles specified are tested in accordance with 24.1.1 to 24.1.9		N/A
	Components not tested and found to comply with relevant IEC standard, components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		N/A
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14, or		P
	tested according to annex F		N/A
24.1.2	Safety isolating transformers complying with IEC 61558-2-6, or		N/A
	tested according to annex G		N/A
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000, or	Interlock switch within coffee mill	P
	tested according to annex H		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
	Switches in (espresso coffee-makers) tested for 10 000 cycles (IEC 60335-2-15)		N/A
24.1.4	Automatic controls complying with IEC 60730-1 with relevant part 2. The number of cycles of operation being:		N/A
	- thermostats: 10 000	Approved	N/A
	- temperature limiters: 1 000		N/A
	- self-resetting thermal cut-outs: 300		N/A
	- voltage maintained non-self-resetting thermal cut-outs: 1000		N/A
	- other non-self-resetting thermal cut-outs: 30		N/A
	- timers: 3 000		N/A
	- energy regulators: 10 000		N/A
	Thermal motor protectors are tested in combination with their motor under the conditions specified in Annex D		N/A
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N/A
	Self-resetting thermal cut-outs with the test of 19.101 are subjected to 3 000 cycles of operation. (IEC 60335-2-15)		N/A
24.1.5	Appliance couplers complying with IEC 60320-1		N/A
	However, appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3		N/A
	Interconnection couplers complying with IEC 60320-2-2		N/A
	Appliance couplers incorporating thermostats, thermal cut-outs or fuses in the connectors shall comply with IEC 60320-1 (IEC 60335-2-15)		N/A
	Not applicable to conditions as specified (IEC 60335-2-15)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N/A
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	The relevant standard for thermal links is IEC 60691. Thermal links not complying with IEC 60691 are considered to be an intentionally weak part for the purposes of Clause 19	Approved	P
24.1.9	Relays, other than motor starting relays, tested as part of the appliance		N/A
	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of operations in 24.1.4 selected according to the relay function in the appliance .....:		N/A
24.2	No switches or automatic controls in flexible cords		P
	No devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		P
	No thermal cut-outs that can be reset by soldering		P
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and having a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
	See note (IEC 60335-2-15)		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance and used accordingly		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42V		N/A
	In addition, the motors are complying with the requirements of Annex I		N/A
24.7	Hose-sets for connection of appliances to the water mains, complying with IEC 61770 and supplied with the appliance		N/A
24.101	Devices incorporated in appliance other than kettles, in order to comply with 19.4, shall be non-self-resetting (IEC60335-2-15)		P
	However, self-resetting thermal cut-outs are allowed for fixed water boilers, if they have been tested for 10 000 cycles of operation		N/A
	Compliance is checked by inspection		P
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		P
	- supply cord fitted with a plug		P
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance		N/A
	- pins for insertion into socket-outlets		N/A
	Appliances incorporating an appliance inlet other than those standardized in IEC 60320-1 shall be supplied with a cord set (IEC 60335-2-15)		N/A
25.2	Appliance not provided with more than one means of connection to the supply mains		P
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
25.3	Connection of supply conductors for appliance intended to be permanently connected to fixed wiring possible after the appliance has been fixed to its support		N/A
	Appliance provided with a set of terminals for the connection of cables or fixed wiring, cross-sectional areas specified in 26.6		N/A
	Appliance provided with a set of terminals allowing the connection of a flexible cord		N/A
	Appliance provided with a set of supply leads accommodated in a suitable compartment		N/A
	Appliance provided with a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate type of cable or conduit		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10		N/A
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in 29		N/A
25.5	Method for assemble supply cord with the appliance:		P
	- type X attachment		N/A
	- type Y attachment		P
	- type Z attachment, if allowed in part 2		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
	Type Z attachment is allowed for egg boilers, feeding bottle heaters, yoghurt makers and stands of cordless kettles (IEC 60335-2-15)		N/A
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords being one of the following types:		P
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 87)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Polyvinyl chloride sheathed: Not used if they are likely to touch metal parts having a temperature rise exceeding 75K during the test of Clause 11.		N/A
	- light polyvinyl chloride sheathed cord (at least 60227 IEC 52), appliances not exceeding 3 kg		N/A
	- ordinary polyvinyl chloride sheathed cord (at least 60227 IEC 53), other appliances	H05VV-F	P
	Heat resistant polyvinyl chloride sheathed: Not used for type X attachment other than specially prepared cords.		N/A
	- Heat-resistant light polyvinyl chloride sheathed cord (at least 60227 IEC 56), appliances not exceeding 3 kg		N/A
	- heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), other appliances		N/A
	Supply cord of livestock feed boilers shall be polychroroprene sheathed (IEC 60335-2-15)		N/A
25.8	Nominal cross-sectional area of supply cords according to table 11; rated current (A); cross-sectional area (mm²) .....:	Max. 5,8A (measured); 0,75 mm²	P
	Portable appliances having a rated current of up to 10 A may incorporate a supply cord having a nominal cross-sectional area of 0,75 mm² if the length is less than 2 m (IEC 60335-2-15)		N/A
25.9	Supply cord not in contact with sharp points or edges		P
25.10	Green/yellow core for earthing purposes in Class I appliance		P
25.11	Conductors of supply cords not consolidated by lead-tin soldering where they are subject to contact pressure, unless		P
	clamping means so constructed that there is no risk of bad contacts due to cold flow of the solder		N/A
25.12	Moulding the cord to part of the enclosure does not damage the insulation of the supply cord		N/A
25.13	Inlet opening so shaped as to prevent damage to the supply cord		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Unless the enclosure at the inlet opening is of insulation material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided	Insulation material	N/A
	If unsheathed supply cord, a similar additional bushing or lining is required, unless		N/A
	the appliance is class 0		N/A
25.14	Supply cords adequately protected against excessive flexing		N/A
	Flexing test:		N/A
	- applied force (N).....:		N/A
	- number of flexings.....:		N/A
	The test does not result in:		N/A
	- short circuit between the conductors		N/A
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage, within the meaning of the standard, to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A
25.15	Conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		P
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		P
	Pull and torque test of supply cord, values shown in table 10: pull (N); torque (not on automatic cord reel) (Nm).....:	100N; 0,35Nm	P
	Max. 2 mm displacement of the cord, and conductors not moved more than 1 mm in the terminals		P
	Creepage distances and clearances not reduced below values specified in 29.1		P

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Clause	Requirement + Test	Result - Remark	Verdict
25.16	Cord anchorages for type X attachments constructed and located so that:		N/A
	- replacement of the cord is easily possible		N/A
	- it is clear how the relief from strain and the prevention of twisting are obtained		N/A
	- they are suitable for different types of cord		N/A
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless separated from accessible metal parts by supplementary insulation		N/A
	- the cord is not clamped by a metal screw which bears directly on the cord		N/A
	- at least one part of the cord anchorage securely fixed to the appliance, unless part of a specially prepared cord		N/A
	- screws which have to be operated when replacing the cord do not fix any other component, if applicable		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for Class 0, 0I and I appliances: they are of insulating material or are provided with an insulating lining, unless a failure of the insulation of the cord does not make accessible metal parts live		N/A
	- for Class II appliances: they are of insulating material, or if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
25.17	Adequate cord anchorages for type Y and Z attachment		P
25.18	Cord anchorages only accessible with the aid of a tool, or		P
	so constructed that the cord can only be fitted with the aid of a tool		P
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		N/A
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	Conductors of the supply cord for type Y and Z attachment adequately additionally insulated		P

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Clause	Requirement + Test	Result - Remark	Verdict
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed to permit checking of conductors with respect to correct positioning and connection before fitting any cover, no risk of damage to the conductors when fitting the cover, no contact with accessible metal parts if a conductor becomes loose, etc.		N/A
	For portable appliances, the uninsulated end of a conductor prevented from any contact with accessible metal parts, unless the end of the cord is such that the conductors are unlikely to slip free		N/A
25.22	Appliance inlet:		N/A
	- live parts not accessible during insertion or removal		N/A
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	- is not for cold conditions if temp. rise of external metal parts exceeds 75 K, unless the supply cord is not likely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except as specified		N/A
	If necessary, electric strength test of 16.3		N/A
25.24	Interconnection cords not detachable without the aid of a tool if compliance with the standard is impaired when they are disconnected		N/A
25.25	Dimensions of pins compatible with the dimensions of the relevant socket-outlet. Dimensions of pins and engagement face in accordance with the relevant plug in IEC 60083		N/A
25.101	Supply cords of kettles shall not be longer than 75 cm, unless they are helically coiled (IEC60335-2-15)		N/A
	If a cordless kettle has a cord storage facility, the length of the cord is measured after storing as much of the cord as possible		N/A
26	TERMINALS FOR EXTERNAL CONDUCTORS		
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Terminals only accessible after removal of a non-detachable cover		P
	However, earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		N/A
26.2	Appliances with type X attachment and appliances for connection to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless the connections are soldered		N/A
	Screws and nuts serve only to clamp supply conductors, except		N/A
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone		N/A
	Soldering alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection to fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure and without damaging the conductor		N/A
	Terminals for type X attachment and those for connection to fixed wiring so fixed that when tightening or loosening the clamping means:		N/A
	- the terminal does not loosen		N/A
	- internal wiring is not subjected to stress		N/A
	- clearances and creepage distances are not reduced below the values in 29		N/A
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified. Nominal diameter of thread (mm); screw category; torque (Nm):		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
26.4	Terminals for type X attachment, except those with a specially prepared cord, and those for connection to fixed wiring, no special preparation of conductors required, and so constructed or placed that conductors prevented from slipping out		N/A
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A
	Stranded conductor test, 8 mm insulation removed		N/A
	No contact between live parts and accessible metal parts and, for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection to fixed wiring suitable for connection of conductors with required cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm²).....:		N/A
	Terminals only suitable for a specially prepared cord		N/A
26.7	Terminals for type X attachment accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection to fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless conductors ends fitted with a device suitable for screw terminals	No flat twin tinsel cord used	N/A
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment: soldered, welded, crimped and similar connections may be used		P
	For Class II appliances: the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	For Class II appliances: soldering, welding or crimping alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free		N/A
27	PROVISION FOR EARTHING		
27.1	Accessible metal parts of Class 0I and I appliances, permanently and reliably connected to an earthing terminal or contact of the appliance inlet		P
	Earthing terminals not connected to neutral terminal		P
	Class 0, II and III appliance have no provision for earthing		N/A
	Safety extra-low voltage circuits not earthed, unless protective extra-low voltage circuits		N/A
27.2	Clamping means adequately secured against accidental loosening		P
	Terminals used for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm², and		N/A
	do not provide earthing continuity between different parts of the appliance		N/A
	Conductors cannot be loosened without the aid of a tool		N/A
27.3	For detachable parts that are plugged into another part of the appliance, and having an earth connection, the earth connection made before and separated after current-carrying connections when removing the part		P
	For appliances with supply cord, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		P
27.4	No risk of corrosion resulting from contact between metal of earthing terminal and other metal		P
	Adequate resistance to corrosion of coated or uncoated parts providing earthing continuity, other than parts of a metal frame or enclosure		P
	Parts of steel providing earthing continuity provided at the essential areas with an electroplated coating, thickness at least 5 µm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N/A
	In case of aluminium alloys precautions taken to avoid risk of corrosion		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided that clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test	0,03Ω	P
27.6	The printed conductors of printed circuit boards shall not be used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		N/A
28	SCREWS AND CONNECTIONS		
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		P
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connection or connections providing earthing continuity		N/A
	Screws used for electrical connections or connections providing earthing continuity screw into metal	No such screws	N/A
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw can impair basic insulation		N/A
	For screws and nuts; test as specified	(see appended table)	P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure not transmitted through insulating material liable to shrink or distort, unless shrinkage or distortion compensated		P
	This requirement does not apply to electrical connections in circuits carrying a current not exceeding 0.5A		N/A
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N/A
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread		N/A
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		N/A
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		N/A
	- in normal use,		N/A
	- during user maintenance,		N/A
	- when replacing a supply cord having a type X attachment, or		N/A
	- during installation		N/A
	At least two screws being used for each connection providing earthing continuity, unless		N/A
	the screw forms a thread having a length of at least half the diameter of the screw		N/A
	Thread-cutting and space-threaded screws may be used in connections providing earthing continuity, provided unnecessary to disturb the connection and at least two screws are used for each connection		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		N/A
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if subjected to torsion		P
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies .....:		N/A
	The microenvironment is pollution degree 1 under Type 1 coating		N/A
	No clearance or creepage distance requirements under Type 2 coating		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless		P
	for basic insulation and functional insulation they comply with the implulse voltage test of clause 14		N/A
	However, if the construction is affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		N/A
	Impulse voltage test not applicable:		P
	- when the microenvironment is pollution degree 3		P
	- for basic insulation of class 0 and class 01 appliances		N/A
	Appliances are in overvoltage category II		P
	Clearances less than specified in table 16 not allowed for basic insulation of class 0 and class 0I appliances,		N/A
	or if pollution degree 3 is applicable		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Compliance is checked by inspection and measurements as specified		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1mm if the microenvironment is pollution degree 1		P
	Lacquered conductors of windings considered to be bare conductors		P
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16		P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, but using the next higher step for rated impulse voltage		P
29.1.4	For functional insulation, the values of table 16 are applicable, unless		P
	the appliance complies with clause 19 with the functional insulation short-circuited		N/A
	Lacquered conductors of windings considered to be bare conductors		P
	However, clearances at crossover points are not measured		P
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
29.1.5	Appliances having higher working voltage than rated voltage, the voltage used for determining clearances from table 16 is the sum of the rated impulse voltage and the difference between the peak value of the working voltage and the peak value of the rated voltage		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree		P
	Pollution degree 2 applies, unless		N/A
	precautions taken to protect the insulation; pollution degree 1	Tubular sheathed heating element	P
	insulation subjected to conductive pollution; pollution degree 3		P
	The microenvironment is pollution degree 3 if the insulation can be polluted by condensation from steam produced during normal use of the appliance (IEC 60335-2-15)		P
	Compliance is checked by inspection and measurements as specified		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17		P
	For pollution degree 1, creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14		N/A
29.2.2	Creepage distances of supplementary insulation at least as specified for basic insulation in table 17		P
29.2.3	Creepage distances of reinforced insulation at least double as specified for basic insulation in table 17		P
29.2.4	Creepage distances of functional insulation not less than specified in table 18		P
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		N/A
29.3	Supplementary and reinforced insulation having adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked by:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- measurement, in accordance with 29.3.1, or		P
	- an electric strength test in accordance with 29.3.2, or		N/A
	- an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3		N/A
29.3.1	Supplementary insulation having a thickness of at least 1 mm		P
	Reinforced insulation having a thickness of at least 2 mm		P
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N/A
	Supplementary insulation consisting of at least 2 layers		N/A
	Reinforced insulation consisting of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of Clause 19 does not exceed the value specified in Table 3, the test of IEC 60068-2-2 is not carried out		N/A
30	RESISTANCE TO HEAT AND FIRE		
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	thermoplastic material providing supplementary or reinforced insulation,		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts: at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C).....:	(see appended table)	P
	Parts supporting live parts: at 40°C plus the maximum temperature rise determined during the test of clause 11, or at 125°C, whichever is the higher; temperature (°C) .....:	(see appended table)	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Parts of thermoplastic material providing supplementary or reinforced insulation, 25°C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C).....:	(see appended table)	P
	For coffee makers, egg boilers, steam cookers and kettles, the temperature rises occurring during the tests of 19.4, 19.5 and 19.101 are not taken into account (IEC 60335-2-15)		P
30.2	Parts of non-metallic material adequately resistant to ignition and spread of fire		P
	This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		N/A
	Compliance checked by the test of 30.2.1. In addition:		P
	- attended appliances, 30.2.2 applies		P
	- unattended appliances, 30.2.3 applies		N/A
	Appliances for remote operation, 30.2.3 applies		N/A
	Base material of printed circuit board, 30.2.4 applies		N/A
	For water distillers and appliances intended to maintain liquid of food at a particular temperature, 30.2.3 applies (IEC 60335-2-15)		N/A
	For other appliances, 30.2.2 applies		P
30.2.1	Glow-wire test of IEC 60695-2-11 at 550 °C, unless		P
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out meet the requirements in ISO9772 for category HBF material		N/A
30.2.2	Appliances operated while attended, parts of non-metallic material supporting current-carrying connections, and parts of non-metallic material within a distance of 3mm of such connections, are subjected to the glow-wire test of IEC 60695-2-11.		P
	The glow-wire test is not carried out on parts of material classified as having a glow-wire flammability index according to IEC 60695-2-12 of at least:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	-750°C, for connections carrying a current exceeding 0,5A during normal operation		N/A
	-650°C, for other connections		N/A
	Test as specified for an interposed shielding material		N/A
	When the glow-wire test of IEC 60695-2-11 is carried out, the temperatures are:		P
	-750°C, for connections carrying a current exceeding 0,5A during normal operation	(see appended table)	P
	-650°C, for other connections		N/A
	Test not applicable to conditions as specified		N/A
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		N/A
	Tests not applicable to conditions as specified		N/A
30.2.3.1	Parts of insulating material supporting connections carrying a current exceeding 0.2A during normal operation, and		N/A
	parts of non-metallic material within a distance of 3mm,		N/A
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850°C		N/A
	Glow-wire test not carried out on parts of material classified as having a glow-wire flammability index of at least 850°C according to IEC 60695-2-12		N/A
	Glow-wire test not carried out on small parts that comply with the needle-flame test of Annex E or on small parts of material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	Test as specified for an interposed shielding material		N/A
30.2.3.2	Parts of non-metallic material supporting current-carrying connections, and		N/A
	parts of non-metallic material within a distance of 3mm,		N/A
	subjected to glow-wire test of IEC 60695-2-11		N/A
	Test not carried out on material having a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	-775°C, for connections carrying a current exceeding 0,2A during normal operation		N/A
	-675°C, for other connections		N/A
	When the glow-wire test of IEC 60695-2-11 is carried out, the temperatures are:		N/A
	-750°C, for connections carrying a current exceeding 0,2A during normal operation		N/A
	-650°C, for other connections		N/A
	Parts that during the test produce a flame persisting longer than 2 s, tested as specified		N/A
	If a flame persists longer than 2 s during the test, parts above the connection, as specified, subjected to the needle-flame test of annex E, unless		N/A
	the material is classified as V-0 or V-1 according to IEC 60695-11-10		N/A
30.2.4	Base material of printed circuit boards subjected to needle-flame test of annex E		P
	Test not applicable to conditions as specified		N/A
31	RESISTANCE TO RUSTING		
	Relevant ferrous parts adequately protected against rusting		P
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		
	Appliance shall not emit harmful radiation, present a toxic or similar hazard due to their operation in normal use		P
	Relevant tests specified in part 2, if necessary		N/A
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		
	Description of routine tests to be carried out by the manufacturer		P
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES		
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A
	This annex does not apply to battery chargers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.1.9	Appliance operated under the following conditions:		N/A
	-the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A
	-the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N/A
	If the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N/A
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A
5.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N/A
7.12	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N/A
	Details about how to remove batteries containing materials hazardous to the environment given		N/A
7.15	Markings placed on the part of the appliance connected to the supply mains		N/A
8.2	Appliances having batteries that according to the instruction may be replaced by the user need only have basic insulation between live parts and the inner surface of the battery compartment		N/A
	If the appliance can be operated without batteries, double or reinforced insulation required		N/A
11.7	The battery is charged for the period described		N/A
19.1	Appliances subjected to tests of 19.101, 19.102 and 19.103		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
19.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N/A
19.102	Short-circuiting of the terminals of the battery, being fully charged, for appliances having batteries that can be removed without the aid of a tool		N/A
19.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N/A
21.101	Appliances having pins for insertion into socket-outlets have adequate mechanical strength, checked according to procedure 2 of IEC 68-2-32		N/A
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-32, the number of falls being:		N/A
	- 100, the mass of part does not exceed 250 g		N/A
	- 50, the mass of part exceeds 250 g		N/A
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A
25.13	An additional lining or bushing not required for interconnection cords operating at safety extra-low voltage		N/A
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N/A
	The value of *p* in Table C.1 is 2000 (IEC 60335-2-15)		N/A
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		

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Clause	Requirement + Test	Result - Remark	Verdict
	Applicable to appliances having motors that incorporate thermal motor protectors	The thermal motor protector within in the motor for coffee mil is not operated during all electrical testing;	N/A
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:	The base of PCB	P
7	Severities		P
	The duration of application of the test flame is 30 s ± 1 s		P
9	Test procedure		P
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1		P
9.2	The first paragraph does not apply		P
	If possible, the flame is applied at least 10 mm from a corner		P
9.3	The test is carried out on one specimen		P
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N/A
11	Evaluation of test results		P
	The duration of burning not exceeding 30 s		N/A
	However, for printed circuit boards, the duration of burning not exceeding 15 s		P
F	ANNEX F (NORMATIVE) CAPACITORS		
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		N/A
1.5	Terminology		N/A
1.5.3	Class X capacitors tested according to subclass X2		N/A
1.5.4	This subclause is applicable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
1.6	Marking		N/A
	Items a) and b) are applicable		N/A
3.4	Approval testing		N/A
3.4.3.2	Table II is applicable as described		N/A
4.1	Visual examination and check of dimensions		N/A
	This subclause is applicable		N/A
4.2	Electrical tests		N/A
4.2.1	This subclause is applicable		N/A
4.2.5	This subclause is applicable		N/A
4.2.5.2	Only table IX is applicable		N/A
	Values for test A apply		N/A
	However, for capacitors in heating appliances the values for test B or C apply		N/A
4.12	Damp heat, steady state		N/A
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		N/A
	This subclause is applicable		N/A
4.14	Endurance		N/A
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 applicable		N/A
4.14.7	Only insulation resistance and voltage proof are checked		N/A
	Visual examination, no visible damage		N/A
4.17	Passive flammability test		N/A
	This subclause is applicable		N/A
4.18	Active flammability test		N/A
	This subclause is applicable		N/A
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		

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Clause	Requirement + Test	Result - Remark	Verdict
	The following modifications to this standard are applicable for safety isolating transformers:		N/A
7	Marking and instructions		N/A
7.1	Transformers for specific use marked with:		N/A
	-name, trademark or identification mark of the manufacturer or responsible vendor		N/A
	-model or type reference		N/A
17	Overload protection of transformers and associated circuits		N/A
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N/A
22	Construction		N/A
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N/A
29	Clearances, creepage distances and solid insulation		N/A
29.1, 29.2 and 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		N/A
H	ANNEX H (NORMATIVE) SWITCHES		
	Switches comply with the following clauses of IEC 61058-1, as modified:		N/A
	-The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		N/A
	-Before being tested, switches are operated 20 times without load		N/A
8	Marking and documentation		N/A
	Switches are not required to be marked		N/A
	However, switches that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N/A
13	Mechanism		N/A
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		N/A
15.1	Not applicable		N/A
15.2	Not applicable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
15.3	Applicable for full disconnection and micro-disconnection		N/A
17	Endurance		N/A
	Compliance is checked on three separate appliances or switches		N/A
	For 17.2.4.4, the number of cycles is 10 000, unless otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335		N/A
	Switches for operation under no load and which can be operated only by a tool and switches operated by hand that are interlocked so that they cannot be operated under load, are not subjected to the tests		N/A
	Subclauses 17.2.2 and 17.2.5.2 not applicable		N/A
	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1		N/A
	Temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1		N/A
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		N/A
	This clause is applicable to clearances and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24		N/A
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		N/A
8	Protection against access to live parts		N/A
8.1	Metal parts of the motor are considered to be bare live parts		N/A
11	Heating		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
11.3	Temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N/A
11.8	Temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N/A
16	Leakage current and electric strength		N/A
16.3	Insulation between live parts of the motor and its other metal parts not subjected to the test		N/A
19	Abnormal operation		N/A
19.1	The tests of 19.7 to 19.9 not carried out		N/A
19.101	Appliance operated at rated voltage with each of the following fault conditions:		N/A
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A
22	Construction		N/A
22.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		N/A
5.7	Conditioning of the test specimens		N/A
	When production samples are used, three samples of the printed circuit board are tested		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.7.1	Cold		N/A
	The test is carried out at -25°C		N/A
5.7.3	Rapid change of temperature		N/A
	Severity 1 is specified		N/A
5.9	Additional tests		N/A
	This subclause is not applicable		N/A
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		
	The information on overvoltage categories is extracted from IEC 60664-1		P
	Overvoltage category is a numeral defining a transient overvoltage condition		P
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		P
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		
	Sequences for the determination of clearances and creepage distances		P
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		

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Clause	Requirement + Test	Result - Remark	Verdict
	The information on pollution degrees is extracted from IEC 60664-1		P
	Pollution		P
	The microenvironment determines the effect of pollution on the insulation, taking into account the microenvironment		P
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		P
	Minimum clearances specified where pollution may be present in the microenvironment		P
	Degrees of pollution in the microenvironment		P
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		P
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence	Sealing compound (to protect oxide magnetism against humidity); Silicon tubing cover the seam	P
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N/A
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		P
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N/A
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:	Insulation enclosure, cordless interface connection, thermal cut-out and PCB	P
7	Test apparatus		P
7.3	Test solutions		P
	Test solution A is used		P

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Clause	Requirement + Test	Result - Remark	Verdict
10	Determination of proof tracking index (PTI)		P
10.1	Procedure		P
	The proof voltage is 100V, 175V, 400V or 600V.....:	175V	P
	The last paragraph of Clause 3 applies		P
	The test is carried out on five specimens		P
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N/A
10.2	Report		N/A
	The report stating if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30		
	Description of tests for determination of resistance to heat and fire		P
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WDaE		N/A
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WdaE, if liable to be connected to a supply mains that excludes the protective earthing conductor		N/A
5	General conditions for the tests		N/A
5.7	The ambient temperature for the tests of Clauses 11 and 13 is 40 $^{+3}/_{0}$		N/A
7	Marking and instructions		N/A
7.1	The appliance marked with the letters WDaE		N/A
7.12	The instructions state that the appliance is to be supplied through a RCD having a rated residual operating current not exceeding 30 mA		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The instructions state that the appliance is considered to be suitable for use in countries having a warm damp equable climate, but may also be used in other countries		N/A
11	Heating		N/A
11.8	The values of Table 3 are reduced by 15 K		N/A
13	Leakage current and electric strength at operating temperature		N/A
13.2	The leakage current for class I appliances not exceeding 0,5 mA		N/A
15	Moisture resistance		N/A
15.3	The value of t is 37 °C		N/A
16	Leakage current and electric strength		N/A
16.2	The leakage current for class I appliances not exceeding 0,5 mA		N/A
19	Abnormal operation		N/A
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		N/A
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		
	Description of tests for appliances incorporating electronic circuits		P
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		
	Software evaluated in accordance with the following clauses of Annex H of IEC 60730-1, as modified		N/A
H.2	Definitions		N/A
	Only definitions H.2.16 to H.2.20 applicable		N/A
H.7	Information		N/A
	Only footnotes 12) to 18) of Table 7.2, as modified, applicable		N/A
H.11.12	Controls using software		N/A
	All the subclauses of H.11.12, as modified, except H.11.12.6 and H.11.12.6.1, applicable		N/A
H.11.12.7	Delete text		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
H.11.12.7.1	For appliances using software class C having a single channel with self-test and monitoring structure, the manufacturer provides the measures necessary to address the fault/errors in safety related segments and data		N/A
H.11.12.8	Software fault/error detection occurs before compliance with 19.13 of IEC 60335-1 is impaired		N/A
H.11.12.8.1	Replace text		N/A
H.11.12.13	Software and safety related hardware under its control initializes and terminates before compliance with 19.13 of IEC 60335-1 is impaired		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	dP	Required dP	Remark
230V	1400	1408	+0,6%	-10% ~ +5%	P

10.2	TABLE: Current deviation				N/A
Current deviation of/at:	I rated (A)	I measured (A)	dI	Required dI	Remark

11.8	TABLE: Heating test, thermocouples (separately test at brewing and grinding function)		P
	Test voltage (V).....:(1753W)	255,0V	—
	Ambient (°C).....:	25 °C	—

Thermocouple locations	dT (K)	Max. dT (K)
Supply cord	10	50
Internal wire connected to heating element	70	175(T200)
Internal wire between PCB	7	55(T80)
Internal wiring within coffee mill	17	80(T105)
X2 capacitor	20	75(T100)
Y2 capacitor (within coffee mill)	18	100(T125)
Interlock switch within coffee mill	15	30(T55)
PCB	32	120
Function changeover switch	32	For clause 30.1
Handle	25	50
Wood support	6	65
Plastic enclosure	40	For clause 30.1
Sleeving	75	175(T200)
Ambient of thermostat	72	195(T220)

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Clause	Requirement + Test	Result - Remark	Verdict

Indicating label	30	For clause 30.1
Cordless interface connection	10	For clause 30.1
Knob	30	60
Winding of motor of water pump	50	80 (class 120)
Bobbin of the motor of water pump	50	For clause 30.1

11.8	TABLE: Heating test, resistance method					P
	Test voltage (V) ..... :			255,0V		—
	Ambient, t_1 (°C) ..... :			25°C		—
	Ambient, t_2 (°C) ..... :			25°C		—
Temperature rise of winding		R_1 (Ω)	R_2 (Ω)	dT (K)	Max. dT (K)	Insulation class
Stator of motor		37,3	40,3	21	90	120

13.2	TABLE: Leakage current		P
	Heating appliances: 1.15 x rated input ..... :	N/A	—
	Motor-operated and combined appliances: 1.06 x rated voltage ..... :	254,4V	—
Leakage current between		I (mA)	Max. allowed I (mA)
Live part and accessible parts over reinforced insulation		0,006	0,25
Live part and accessible parts over basic insulation		0,04	0,75

13.3	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown (Yes/No)
Live part and accessible parts over reinforced insulation		3000	No
Live part and accessible parts over basic insulation		1000	No

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14	TABLE: Transient overvoltages				N/A
Clearance between:	Cl (mm)	Required Cl (mm)	Rated impulse voltage (V)	Impulse test voltage (V)	Flashover (Yes/No)

16.2	TABLE: Leakage current		P
	Single phase appliances: 1.06 x rated voltage..... :	254,4V	—
	Three phase appliances 1.06 x rated voltage divided by √3: ..... :	N/A	—

Leakage current between	I (mA)	Max. allowed I (mA)
Live part and accessible parts over reinforced insulation	0,006	0,25
Live part and accessible parts over basic insulation	0,04	0,75

16.3	TABLE: Electric strength	P
Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
Live part and accessible parts over reinforced insulation	3000	No
Live part and accessible parts over basic insulation	1250	No

17	TABLE: Overload protection, temperature rise	N/A
Temperature rise of part/at:	dT (K)	Max. dT (K)

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19.7	TABLE: Abnormal operation, locked rotor/moving parts					P
	Test voltage (V) ..... :	240				—
	Ambient, t_1 (°C) ..... :	25				—
	Ambient, t_2 (°C) ..... :	25				—
Temperature of winding		R_1 (Ω)	R_2 (Ω)	dT (K)	T (°C)	Max. T (°C)
Water pump (measured by thermocouple)						
during the first hour, maximum value		-	-	-	101	215
after the first hour, maximum value		-	-	-	98	190
after the first hour, arithmetic average		-	-	-	85	165

19.9	TABLE: Abnormal operation, running overload					N/A
	Test voltage (V) ..... :					—
	Ambient, t_1 (°C) ..... :					—
	Ambient, t_2 (°C) ..... :					—
Temperature of winding		R_1 (Ω)	R_2 (Ω)	dT (K)	T (°C)	Max. T (°C)

19.13	TABLE: Abnormal operation, temperature rises		P
Thermocouple locations		dT (K)	Max. dT (K)
19.2			
Supply cord		8	150
Wooden support		5	150
Plastic enclosure		35	For clause 30.1

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Indicating label	30	For clasue 30.1
19.3		
Supply cord	12	150
Wooden support	9	150
Plastic enclosure	45	For clause 30.1
Indicating label	40	For clasue 30.1
19.4 & 19.5		
Supply cord	15	150
Wooden support	12	150
19.11		
Supply cord	10	150
Wooden support	7	150
Plastic enclosure	36	For clause 30.1
Indicating label	34	For clasue 30.1

24.1	TABLE: Components				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity
Power plug	Ningbo Qiaopu Electric Co., Ltd	D03	250V~ 16A	DIN VDE 0620 CEE 7 or IEC 884	VDE* (40002872)
Alternative	Yongkang Dedong Wire Co., Ltd	YDD-03	250V~ 16A	DIN VDE 0620 CEE 7 or IEC 884	VDE* (40023026)
Alternative	Ningbo Qiaopu Electric Co., Ltd	D09	250V~ 13A	BS 1363-1:1995 +A1 +A2+A3	ASTA* (930)
Power cord	Ningbo Qiaopu Electric Co., Ltd	H05VV-F	3 X 0,75 mm^2	DIN VDE 0281-5 HD 21	VDE* (136970)
Alternative	Yongkang Dedong Wire Co., Ltd	H05VV-F	3 X 0,75 mm^2	DIN VDE 0281-5 HD 21	VDE* (40021638)
Thermostat	Therm-O-Disc Europe B.V.	36TMH01130 C	250V~ 10A T220 1E4 Cycles	EN 60 730-2-9	VDE* (40012575)
Thermal link	Therm-O-Disc Europe B.V.	G4A00240C	250V~ 10A Tf:240ºC	EN 60 691	VDE* (40017228)

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Alternative	Therm-O-Disc Europe B.V.	G4A01240C	250V~ 10A Tf:240ºC	EN 60 691	VDE* (40017228)
Cordless interface system	YUEQING DEVELOPED ELECTRICAL EQUIPMENT CO., LTD	KSD-168-C	220-240V~ 13A	EN 60 335-2-15; EN 60 335-2-14;	Test with appliance
Heating element	Hangyu Electronic Technology Co., Ltd	230V-1200W	230V 1200W	EN 60 335-2-15	Test with appliance
Pump	Ningbo Jiayin Electro Mechanical Technology Co. Ltd	JYPC-5	220-240V~ 50Hz 45W Class II (between water and live part of pump)	EN 60 335-2-41 EN 60 335-2-15	Test with appliance VDE* (40022290)
Alternative	Ulka Costruzioni Elettromeccaniche S.r.l.	EP5	230V~ 50Hz 48W	EN 60 335-2-41 EN 60 335-2-15	Test with appliance VDE* (40013711)
Thermal cut out	Jiangsu Changsheng Electric Appliance Co. Ltd	BR-B3D	250V~ Tf:85ºC	EN 60730-2-2	VDE* (132813)
Internal wiring connected to heating element	NIZING ELECTRIC CO LTD	3122	300V T200 16-18AWG	EN 60 335-2-15	Test with appliance UL (E215834)
Alternative	SHANGHAI SHENYUAN HIGH TEMPERATURE WIRE CO LTD	3122	300V T200 16-18AWG	EN 60 335-2-15	Test with appliance UL (E252215)
Alternative	DONGGUAN NISTAR TRANSMITTING TECHNOLOGY CO INC	3122	300V T200 16-18AWG	EN 60 335-2-15	Test with appliance UL (E214184)
Internal wiring between PCB	SHENZHEN DONG JU WIRE & CABLE CO LTD	2468	300V T80 26AWG	EN 60 335-2-15	Test with appliance UL (E189674)

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Alternative	YUEQING KANGHUA ELECTRIC CO LTD	2468	300V T80 26AWG	EN 60 335-2-15	Test with appliance UL (E317788)
Alternative	YUEQING BOYUAN ELECTRONIC WIRE & CABLE CO LTD	2468	300V T80 26AWG	EN 60 335-2-15	Test with appliance UL (E203561)
Indicator label	NINGBO FENGHUA KUNPENG LABEL CO LTD	--	Min. thickness: 0,3 mm	EN 60 335-2-15; EN 60 335-2-14;	Test with appliance
Plastic enclosure	Chi Mei Corp.	ABS	Min. thickness: 2,7 mm	EN 60 335-2-15	Test with appliance
PCB	Pan An PCB Fty.	PFR-4	94V-0 Min. thickness: 1,5mm	EN 60 335-2-15; EN 60 335-2-14;	Test with appliance UL (E199273)
Alternative	ZHEJIANG TIANCHI ELECTRONICS CO LTD	TC-1	94V-0 Min. thickness: 1,5 mm	EN 60 335-2-15; EN 60 335-2-14;	Test with appliance UL (E255892)
X2 capacitor	Tenta Electric Industrial Co., Ltd.	MEX	0,1 µ F, 275VAC, T100	IEC 60384-14	VDE* (119119)
Alternative	Carli Electronics Co., Ltd.	MPX	0,1 µ F, 275VAC, T100	IEC 60384-14	VDE* (40008520)
Fuse	Cooper Bussmann Inc.	S506	250V~ 10A	EN 60127-1	VDE* (40011926)
Alternative	Sun Electric Co. O/B Heroday Ltd.	5B-series	250V~ 10A	EN 60127-1	VDE* (40011342)
Alternative	Dongguan Better Electronic Technology Co., Ltd	5T/524 T10AH250V	250V~ 10A	EN 60127-1	VDE* (40020107)
Closed-end connector	The Heavy Power Industrial Co., Ltd.	CE-2	Min. thickness: 2,0mm	EN 60 335-2-15; EN 60 335-2-14;	Test with appliance UL (E113650)

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	KAI SUH SUH ENTERPRISE CO LTD	CE-2	Min. thickness: 1,2mm	EN 60 335-2-15; EN 60 335-2-14;	Test with appliance UL (E116091)
Hot water hose	Hangyu Electronic Technology Co., Ltd	Silicon tubing	Min. thickness: 0,7mm	EN 60335-2-15	Test with the appliance
Cold water hose	Hangyu Electronic Technology Co., Ltd	Teflon tubing	Min. thickness: 2,45mm	EN 60335-2-15	Test with the appliance
Function selection switch	ZHEJIANG LEMA ELECTRICS CO LTD	KW-1	250V~ 3A	EN 60335-2-15; EN 60 335-2-14;	Test with the appliance
Sleeving	Jiangyin Yuanda Electrical Material Co., Ltd	DRS	T200 600V AWG18	EN 60 335-2-15; EN 60 335-2-14;	Test with appliance UL (E246632)
Coffee Mill includes					
Motor	Hangyu Electronic Technology Co., Ltd	HC5420-230M	220-240V 50Hz 100W Class 120(E) Stator:35,70Ω (22,8°C) Rotor (1-10): 50,30Ω (22,8°C) magnet winding material: copper	EN 60335-2-14	Test with the appliance
Thermal cut out	DongLiYa Electronics Factory	RS	250V~ Tf:115ºC	EN 60730-2-9	VDE* (40022445)
Alternative	Foshan Ji Hui Electrical Appliance Co., Ltd	BW-series	250V~ Tf:115ºC	EN 60730-2-2	VDE* (40019595)
Alternative	Chang Zhou City Tong Li Electronic Co., Ltd	KW115ºC	250V~ Tf:115ºC	EN 60730-2-2	VDE* (40004418)
Y2 capacitor	Jyh Chung Electronic Co., Ltd	JY	2200pF 250V T125	IEC 60384-14	VDE* (40015983)

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Internal wiring	ZHEJIANG XINXIN ELECTRONIC WIRE ROD CO LTD	1015	600V 18AWG T105	EN 60335-2-14	Tested with appliance UL (E225383)
Alternative	NINGBO YUNHUAN ELECTRONICS GROUP CORP	1015	18AWG T105 600V	EN 60335-2-14	Tested with appliance UL (E137395)
Enclosure	Chi Mei Corp.	ABS	Min. thickness: 2,0 mm	EN 60 335-2-14	Test with appliance
Interlock switch	YUEQING DONG NAN ELECTRONIC CO LTD	KW10	250V~ 3(0,5)A T55 10000 operations	EN 61058-1	TUV* (R 50060067)
[1)] An asterisk indicates a mark which assures the agreed level of surveillance					

28.1	TABLE: Threaded part torque test	P

Threaded part identification	Diameter of thread (mm)	Column number (I, II, or III)	Applied torque (Nm)
Earthing screw	2,9	II	0,5

29.1	TABLE: Clearances		P
	Overvoltage category... :	II	—

		Type of insulation:				
Rated impulse voltage (V):	Min. cl (mm)	Basic	Functional	Supplementary	Reinforced	Verdict / Remark
330	0,5*					N/A
500	0,5*					N/A
800	0,5*					N/A
1 500	0,5*/**					N/A
2 500	**1,5****	1,8mm(1)	3,5mm (2)	5,0mm (3)		P
4 000	**3,0****				9,4mm (4)	P

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Clause	Requirement + Test	Result - Remark	Verdict

6 000	5,5**					N/A
8 000	8,0**					N/A
10 000	11,0**					N/A

*) The value is increased to 0,8mm for pollution degree 3
*) If the construction is affected by wear, distortion, movement of the parts or during assembly, the value is increased by 0,5 mm

(1): L/N—earthing terminal (within the cordless interface connection):4,2mm; End of heating elements—earthing metal:1,8mm>1,0mm (limit); winding of motor—metal core:3,5mm; commutator — motor axis: 2,9mm

(2): L—N (within the cordless interface connection):3,5mm; L— N on PCB: 6,0mm;

(3): Internal wiring—accessible parts :5,0mm

(4): Live parts in the cordless interface connection —accessible surface: 14,0mm; grinding switch terminal — accessible part: 9,4mm

29.2	TABLE: Creepage distances, basic, supplementary and reinforced insulation										P
Working voltage (V)	Creepage distance (mm) Pollution degree										
	1	2			3			Type of insulation			
		Material group			Material group						
		I	II	IIIa/IIIb	I	II	IIIa/IIIb	B*)	S*)	R*)	Verdict
≤50	0,2	0,6	0,9	1,2	1,5	1,7	1,9		—	—	N/A
≤50	0,2	0,6	0,9	1,2	1,5	1,7	1,9	—		—	N/A
≤50	0,4	1,2	1,8	2,4	3,0	3,4	3,8	—	—		N/A
>50 and ≤125	0,3	0,8	1,1	1,5	1,9	2,1	2,4		—	—	N/A
>50 and ≤125	0,3	0,8	1,1	1,5	1,9	2,1	2,4	—		—	N/A
>50 and ≤125	0,6	1,6	2,2	3,0	3,8	4,2	4,8	—	—		N/A
>125 and ≤250	**1.0** (4)	1,3	1,8	2,5	3,2	3,6	**4,0**	4,2 (1)	—	—	P
>125 and ≤250	0,6	1,3	1,8	2,5	3,2	3,6	**4,0**	—	5,0 (2)	—	P
>125 and ≤250	1,2	2,6	3,6	5,0	6,4	7,2	**8,0**	—	—	11,4 (3)	P
>250 and ≤400	1,0	2,0	2,8	4,0	5,0	5,6	6,3		—	—	N/A

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Clause	Requirement + Test							Result - Remark			Verdict
>250 and ≤400	1,0	2,0	2,8	4,0	5,0	5,6	6,3	—		—	N/A
>250 and ≤400	2,0	4,0	5,6	8,0	10,0	11,2	12,6	—	—		N/A
>400 and ≤500	1,3	2,5	3,6	5,0	6,3	7,1	8,0		—	—	N/A
>400 and ≤500	1,3	2,5	3,6	5,0	6,3	7,1	8,0	—		—	N/A
>400 and ≤500	2,6	5,0	7,2	10,0	12,6	14,2	16,0	—	—		N/A
>500 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0		—	—	N/A
>500 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	—		—	N/A
>500 and ≤800	3,6	6,4	9,0	12,6	16,0	18,0	20,0	—	—		N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5		—	—	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	—		—	N/A
>800 and ≤1000	4,8	8,0	11,2	16,0	20,0	22,0	25,0	—	—		N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0		—	—	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	—		—	N/A
>1000 and ≤1250	6,4	10,0	14,2	20,0	25,0	28,0	32,0	—	—		N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0		—	—	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	—		—	N/A
>1250 and ≤1600	8,4	12,6	18,0	25,0	32,0	36,0	40,0	—	—		N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0		—	—	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	—		—	N/A
>1600 and ≤2000	11,2	16,0	22,0	32,0	40,0	44,0	50,0	—	—		N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25, 0	28,0	32,0		—	—	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25, 0	28,0	32,0	—		—	N/A
>2000 and ≤2500	15,0	20,0	28,0	40,0	50,0	56,0	64,0	—	—		N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0		—	—	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	—		—	N/A
>2500 and ≤3200	20,0	25,0	36,0	50,0	64,0	72,0	80,0	—	—		N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0		—	—	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	—		—	N/A
>3200 and ≤4000	25,0	32,0	44,0	64,0	80,0	90,0	100,0	—	—		N/A

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>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0		—	—	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	—		—	N/A
>4000 and ≤5000	32,0	40,0	56,0	80,0	100,0	112,0	126,0	—	—		N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0		—	—	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	—		—	N/A
>5000 and ≤6300	40,0	50,0	72,0	100,0	126,0	142,0	160,0	—	—		N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0		—	—	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	—		—	N/A
>6300 and ≤8000	50,0	64,0	90,0	126,0	160,0	180,0	200,0	—	—		N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0		—	—	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	—		—	N/A
>8000 and ≤10000	64,0	80,0	112,0	160,0	200,0	220,0	250,0	—	—		N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0		—	—	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	—		—	N/A
>10000 and ≤12500	80,0	100,0	142,0	200,0	250,0	280,0	320,0	—	—		N/A

*), B=Basic, S=Supplementary and R=Reinforced

(1): L/N—earthing terminal (within the cordless interface connection):4,2mm; End of heating elements—earthing metal: 9,0mm; The commutator — motor axis: 7,3mm; the distance between winding and rotor:3,5mm>1,5mm ;

(2): Internal wiring (within stand)—accessible parts:5,0mm

(3): Live parts in the cordless interface connection —accessible surface: 15,3mm; grinding switch terminal — accessible part: 11,4mm

(4) :End of heating elements—earthing enclosure of heating tubing (inside surface): 1,8 mm > 1,0mm (limit)

29.2	TABLE: Creepage distances, functional insulation							P
Working voltage (V)	Creepage distance (mm) Pollution degree							
	1	2			3			
		Material group			Material group			
		I	II	IIIa/IIIb	I	II	IIIa/IIIb	Verdict / Remark

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≤50	0,2	0,6	0,8	1,1	1,4	1,6	1,8	N/A
>50 and ≤125	0,3	0,7	1,0	1,4	1,8	2,0	2,2	N/A
>125 and ≤250	0,4	1,0	1,4	2,0	2,5	2,8	**3,2**	P / 4,2mm
>250 and ≤400	0,8	1,6	2,2	3,2	4,0	4,5	5,0	N/A
>400 and ≤500	1,0	2,0	2,8	4,0	5,0	5,6	6,3	N/A
>500 and ≤800	1,8	3,2	4,5	6,3	8,0	9,0	10,0	N/A
>800 and ≤1000	2,4	4,0	5,6	8,0	10,0	11,0	12,5	N/A
>1000 and ≤1250	3,2	5,0	7,1	10,0	12,5	14,0	16,0	N/A
>1250 and ≤1600	4,2	6,3	9,0	12,5	16,0	18,0	20,0	N/A
>1600 and ≤2000	5,6	8,0	11,0	16,0	20,0	22,0	25,0	N/A
>2000 and ≤2500	7,5	10,0	14,0	20,0	25,0	28,0	32,0	N/A
>2500 and ≤3200	10,0	12,5	18,0	25,0	32,0	36,0	40,0	N/A
>3200 and ≤4000	12,5	16,0	22,0	32,0	40,0	45,0	50,0	N/A
>4000 and ≤5000	16,0	20,0	28,0	40,0	50,0	56,0	63,0	N/A
>5000 and ≤6300	20,0	25,0	36,0	50,0	63,0	71,0	80,0	N/A
>6300 and ≤8000	25,0	32,0	45,0	63,0	80,0	90,0	100,0	N/A
>8000 and ≤10000	32,0	40,0	56,0	80,0	100,0	110,0	125,0	N/A
>10000 and ≤12500	40,0	50,0	71,0	100,0	125,0	140,0	160,0	N/A

30.1	TABLE: Ball pressure			P
Part	Test temperature (°C)	Impression diameter (mm)	Allowed impression diameter (mm)	
Plastic enclosure	80	0,8	2,0	
Indicating label	75	0,7	2,0	
Cordless interface connection	125	0,7	2,0	
Thermal cut-out	125	0,3	2,0	
Thermostat	125	0,2	2,0	
Function selection switch	125	0,5	2,0	

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Interlock switch	125	0,7	2,0
PCB	125	1,3	2,0
X2 capacitor	125	0,3	2,0
Brush holder	125	0,6	2,0
Bobbin of motor	125	0,5	2,0
Y2 capacitor	125	0,3	2,0
Bobbin of motor of water pump	125	0,4	2,0
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30.2	TABLE: Glow-wire		P
Part	Test temperature (°C)	Ignition	Remarks
Plastic enclosure	550	No	P
Indicating label	550	No	P
Cordless interface connection	750	No	P
Thermal cut-out	750	No	P
Thermostat	750	No	P
Function selection switch	750	No	P
Interlock switch	750	No	P
PCB	750	No	P
X2 capacitor	750	No	P
Brush holder	750	No	P
Bobbin of motor	750	No	P
Y2 capacitor	750	No	P
Closed-end connector	750	No	P
Bobbin of motor of water pump	750	No	P
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Clause	Requirement + Test	Result - Remark	Verdict

APPENDIX 1: EN group difference to IEC60335-1 and IEC 60335-2-15

GROUP DIFFERENCES to IEC 60335-1, 4th ed + Amendment A1(2004) + Amendment A2 (2006)

6.1	Protection against electric shock: Class ~~0, 0I (IEC 60335-1)~~, I, II, III	Class I	P
7.1	Rated voltage or voltage range shall cover -230 V for single-phase appliances -400 V for multi-phase appliances	220-240V	P
24.5	Delete the second paragraph of the requirement. Annex G (normative) Safety isolating transformers		N/A
24.1.7	Replace by: If the remote operation of the appliance is via a telecommunication network, the relevant standards for the telecommunication interface circuitry in the appliance are EN 41003 and EN 60950-1:2006, Subclause 6.3. (EN60335-1/ A13)		N/A
25.6	Supply cords of single-phase portable appliances having a rated current not exceeding 16 A shall be provided with a plug complying with the following standard sheets of IEC 60083: 1975:		P
25.6	-for Class I appliances (standard sheet C2b, C3b or C4)	C4	P
	-for Class II appliances (standard sheet C5 or C6)		N/A
25.7	Add -ordinary polychloroprene sheathed flexible cord (code designation 60245 IEC 57) (H05RN-F)		N/A
	When supply cords having high flexibility are used, they shall not be lighter than :		N/A
	- rubber insulated and sheathed cord (code designation 60245 IEC 86) (H03RR-H);		N/A
	- rubber insulated, crosslinked PVC sheathed cord (code designation 60245 IEC 87) (H03RV4-H);		N/A
	- crosslinked PVC insulated and sheathed cord (code designation 60245 IEC 88) (H03V4V4-H).		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		P
29	Replace the text by the following: 29.1, 29.2 and 29.3 The distances specified in items 2a, 2c and 3 in Table 13 of IEC 61558-1 apply. NOTE The values stated for pollution degree 2 are applicable.		N/A
29.3 (Replace)	Replace the third dashed item by: - an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3 and, for accessible reinforced insulation consisting of a single layer, measurement in accordance with 29.3.Z1. (EN60335-1/ A12)		N/A
29.3.Z1 (Add)	If accessible reinforced insulation consists of a single layer, the thickness of this layer shall comply with Table Z1. (EN60335-1/ A12)		N/A
ANNEX ZB (normative)	A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the Competence of the CEN/CENELEC member.		P
ANNEX ZC (normative)	Normative references to international publications with their corresponding European publications		P
ANNEX ZD (informative)	IEC and CENELEC code designations for flexible cords		P
ZA	**ANNEX ZA, SPECIAL NATIONAL CONDITIONS (EN 60335-1:2002)**		
7.1	ITALY: Only plugs listed in CENELEC Report R0BT-005:2001 are allowed. (Statuatory Instrument NO. 105 of 1949) The voltage is 220 V/380 V.		N/A
7.12	DENMARK: requirements regarding marking tag of power supply cord and connecting of earthing wire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
19.5	NORWAY: the test is also applicable to appliances intended to be permanently connected to fixed wiring		N/A
22.2	FRANCE, NORWAY: The second paragraph of this subclause dealing with single-phase Class I permanently connected appliances with heating elements is not applicable due to the supply system		N/A
25.6	BELGIUM, FRANCE, SPAIN , UNITED KINGDOM: plugs according to Standard Sheet C2b not allowed		P
	AUSTRIA, FINLAND, GERMANY, ICELAND, IRELAND, ITALY, LUXEMBOURG, NETHERLANDS, NORWAY, PORTUGAL, SPAIN, SWEDEN, SWITZERLAND, UNITED KINGDOM: plugs according to Standard C3b not allowed		P
	DENMARK: Supply cords of single-phase portable appliances having a rated current not exceeding 13 A provided with a plug according to the following:		N/A
	- Class I appliances: Section 107-2-D1 Standard Sheet DK2-1a		N/A
	For appliances covered by a Part 2 of EN 60 335, also plugs in accordance with Section 107-2-D1 Standard Sheet C2b, C3b or C4 are allowed	C4	P
	- Class II appliances: Section 107-2-D1, Standard Sheet C1b ,C5, C6, DKA2-1a and DKA2-1b		N/A
	Stationary single-phase appliances, having a rated current not exceeding 13 A, and provided with a plug, the plug is in accordance with the requirements above		N/A
	Multi-phase appliances and single-phase appliances having a rated current exceeding 13 A, and provided with a plug, the plug is in accordance with the requirements below:		N/A
	- Class I appliances: Section 107-2-D1, Standard Sheet DK6-1a/EN 60 309-2, Standard Sheet 2-II, 2-IV		N/A
	- Class II appliances: Section 107-2-D1, Standard Sheet DK6-1a*/2-II, 2-IV*		N/A
	For max. allowed current values see EN 60335-1		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	IRELAND: plug is in accordance with Standard Sheets B2 and C2b (see annex ZB as well)		N/A
	ITALY: Only plugs listed in CENELEC Report ROBT-005:2001 are allowed		N/A
	SPAIN: For household appliances the following plugs only are allowed:		P
	- UNE 20315:ESC 10-1b, C2b, C4, C6, or ESB 25-5b;	C4	P
	- UNE-EN 50075		N/A
	SWITZERLAND: supply cords of portable household and similar electrical appliances, rated current not exceeding 10 A, provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets:		N/A
	SEV 6532-2:1991 plug type 15 3P+N+PE 250/400 V, 10 A		N/A
	SEV 6533-2:1991 plug type 11 L+N 250 V, 10 A		N/A
	SEV 6534-2:1991 plug type 12 L+N+PE 250 V, 10 A		N/A
	UNITED KINGDOM: plug according to Standard Sheet B2 or C5 used (refer to Annex ZB)	B2	P
25.8	IRELAND, UNITED KINGDOM: replacement of figures (rated current/cross-sectional area) in the table		P

ZB	**ANNEX ZB, A-DEVIATIONS** (EN 60335-1:2002)		
4	SWITZERLAND: information about batteries		N/A
7.1	ITALY: the voltage is 220 V/380 V	220V only	P
	SPAIN: the voltages are 127 V/220 V and 220 V/380 V	220V only	P
25.6	IRELAND / UNITED KINGDOM: regulations concerning plugs to be fitted to domestic appliances		P

GROUP DIFFERENCES to IEC 60335-2-15, 5th edition (2002) + Amendment 1 (2005)

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Clause	Requirement + Test	Result - Remark	Verdict
	The text of the International Standard IEC 60335-2-15 (2002) + Amendment1 (2005) was approved by CENELEC as a European Standard without any modification		P

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Clause	Requirement + Test	Result - Remark	Verdict

APPENDIX 2: EMF

	The Tested product also complies to the requirements of EN 50366:2003+A1		—
	Limit ……100%	Measured max. 1,2%	P

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Clause	Requirement + Test	Result - Remark	Verdict
APPENDIX 3: The assessment according to EN 60335-2-15:2002 / A2:2008			
5.101	Induction rice cookers are tested as motor-operated appliances.		N/A
7.12	Add the following: The instructions shall include the substance of the following: This appliance is intended to be used in household and similar applications such as: – staff kitchen areas in shops, offices and other working environments; – farm houses; – by clients in hotels, motels and other residential type environments; – bed and breakfast type environments.		P
11.3	Addition: NOTE 101 If the magnetic field of an induction rice cooker unduly influences the results, the temperature rises can be determined using platinum resistances with twisted connecting wires or any equivalent means.		N/A
11.7.103	After “Slow cookers,” add “rice cookers,”		N/A
11.7.104	Add the following after the first paragraph: For automatic espresso coffee makers and espresso coffee makers provided with a coffee pot, the brewing period is the time necessary to produce the maximum quantity of coffee allowed by the timer or by the capacity of the coffee pot.	The maximum quantity is limited by timer (30s)	P
	For manual espresso coffee makers, if the maximum quantity of coffee to be produced is not specified in the instructions, the brewing period is the time necessary to produce 100 ml of coffee for each cycle.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Replace the existing second paragraph by the following: For espresso coffee-makers having an outlet for supplying steam or hot water, the brewing period is immediately followed by a period during which the steam or water is supplied for the time stated in the instructions or for the following periods, whichever is more unfavourable: – for espresso coffee-makers having an outlet for supplying steam, 1 min; – for espresso coffee-makers having an outlet for supplying hot water, the time necessary to produce 100 ml of water.		P
15.2	Add the following to the addition: For coffee makers provided with a removable coffee pot, the liquid container is filled with maximum amount of water containing 1 % NaCl. The funnel is placed in position but without placing the coffee pot in position. The appliance is switched on and operated until the container is empty.		P
15.2	Add the following to the modification: For rice cookers, the test specified in Part 1 shall be conducted with the rice container in place.		N/A
15.103	The interior of rice cookers shall not be affected by water. Compliance is checked by the following test. The rice cooker is placed on a horizontal surface, with the rice container removed and 30 ml of water containing approximately 1 % NaCl is poured on to the centre of the bottom of the interior of the rice cooker. The saline solution is poured steadily through a tube having an inner diameter of 8 mm and a length of 30 mm, over a period of 2 s, the lower end of the tube being 200 mm above the bottom of the rice cooker. The rice cooker shall then withstand the electric strength test of 16.3.		N/A
19.2	Add the following: Induction rice cookers are operated under the conditions of Clause 11 with the rice container empty.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
19.13	Add the following: The temperature rise of the windings of induction rice cookers shall not exceed the values specified in 19.7. The electric strength test of induction rice cookers is carried out immediately after switching off the appliance.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
APPENDIX 4:The assessment according to EN 60335-2-14:2006 + A1:2008			
6.1	Hand-held kitchen machines shall be class II or class III. (EN 60335-2-14: 2006)		N/A
7.12	Instructions shall include the operating times and speed settings for accessories	No accessories.	N/A
	Adequate instruction for use for slicing machines provided with a base having a plain surface underneath the sliding feed table		N/A
	The instructions for food processors shall warn against misuse		N/A
	Instructions for hand-held blenders :		N/A
	- always disconnect the blender from the supply if it is left unattended and before assembling, disassembling or cleaning		N/A
	- do not allow children to use the blender without supervision.		N/A
	Accessories, other than those supplied with the appliance, shall include instructions for their safe use.		N/A
	The instructions shall include details on how to clean surfaces in contact with food (IEC 60335-2-14 : 2006)		P
	The instructions for appliances incorporating a switch necessary for compliance with 22.40 shall include the substance of the following (IEC 60335-2-14 : 2006) :		N/A
	Switch off the appliance before changing accessories or approaching parts which move in use	No such switch	N/A
11.1	No excessive temperatures in normal use		P
11.2	Placing and mounting of appliance as described	within the appliance	P
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		P
	the windings makes it difficult to make the necessary connections		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
11.4	Heating appliances operated under normal operation at 1.15 times rated power input ..... :		N/A
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage ..... :	1,06 times rated voltage (254,4V) is the most unfavourable voltage	P
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage ..... :		N/A
11.7	Tests carried out as specified.	(see appended tables)	P
11.8	Temperature rises not exceeding values in table 3	(see appended tables)	P
	Protective devices do not operate		N/A
	Sealing compound does not flow out		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4 (IEC 60335-1/A1 : 2004)		N/A
19.1	The risk of fire or mechanical damage under abnormal or careless operation obviated		P
	Test of 19.7 only applicable to berry-juice extractors, blenders for food, centrifugal juicers, churns, food mixers, food processors, ice-cream machines, mincers, and noodle makers.		N/A
	Coffee mills and grain grinders subjected to the tests of 19.101, and to 19.102 unless they have to be kept switched on by hand.		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11 (IEC 60335-1/A2: 2006)		N/A
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque or locking moving parts of other appliances		N/A
	Locked rotor, motor capacitors open-circuited or short-circuited, if required		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, if required		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed		N/A
	Berry-juice extractors, blenders for food, centrifugal juicers for fruit and vegetables, food mixers, food processors, and mincers are operated for 30 s		N/A
	Coffee mills, grain grinders and noodle makers are tested for 5 min		N/A
	Churns and ice-cream machines are operated until steady conditions are established		N/A
	Other appliances supplied with rated voltage for a period as specified		N/A
	Winding temperatures not exceeding values specified in table 8		N/A
19.8	Three-phase motors operated at rated voltage with one phase disconnected		N/A
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		N/A
	Winding temperatures not exceeding values as specified		N/A
19.10	Series motor operated at 1.3 times rated voltage for 1 min..... :	312V	P
	During the test, parts not being ejected from the appliance		P
	Test repeated with accessories in position but without additional load		N/A
	Coffee mills and grain grinders only tested for 30 s		P
19.101	Coffee mills and grain grinders are supplied at rated voltage and operated under normal operation five times with rest periods.		P
	Duration of operating period as specified in IEC 60335-2-14…	1min	P
	Duration of rest period as specified in IEC 60335-2-14…	60s	P
	Winding temperatures not exceeding values as specified in Table 8	72°C < 215°C	P

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Clause	Requirement + Test	Result - Remark	Verdict
19.102	Coffee mills and grain grinders subjected to the test as specified in IEC 60335-2-14 and carried out on three additional appliances		P
	If any of the motors stall, original appliance subjected to the test of 19.7	Motor does not stall	N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		P
	Protective enclosures, guards and similar parts are non-detachable		P
	Adequate mechanical strength and fixing of protective enclosures		P
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, by unexpected reclosure		N/A
	Not possible to touch dangerous moving parts with test probe		P
	Detachable accessories are removed and covers are opened except that for :		N/A
	- centrifugal juicers, the cover and the container for collecting the residue are in position		N/A
	- graters and shredders, this is only applicable to accessories that are removed while the appliance is in operation		N/A
	Test probe not applied to:		N/A
	– appliances specified in the list		N/A
	– the following parts of other appliances:		N/A
	smooth shafts having a diameter not exceeding 8 mm, rotating at a speed not exceeding 1 500 rev/min and driven by motors having an input not exceeding 200 W		N/A
	outlet sides of grating and shredding disks rotating at a speed not exceeding 1 500 rev/min		N/A
	projections from the surface of grinding disks, cones and similar parts having a height less than 4 mm		N/A
	Test probe not applied to feed openings having a throat with following dimensions		N/A
	- a height of at least 100 mm, measured from the upper edge of the cutting blade .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- an average of the maximum and minimum cross-sectional dimensions of the feed opening that does not exceed 65.5 mm ..... :		N/A
	- a maximum cross-sectional dimension of the feed opening that does not exceed 76 mm ..... :		N/A
	For blenders, detachable parts, except lids, are not removed. Test carried out with a test probe similar to that of test probe B of IEC 61032 but with circular stop face as specified.		N/A
20.101	Accessories for cream whippers, egg beaters and hand-held food mixers have no knife edges, unless a suitable guard prevents accidental contact with their rotating parts		N/A
	Hand-held food mixer: not possible to easily release the working tools while rotating at a speed exceeding 1500rev/min		N/A
20.102	Blades of hand-held blenders are completely screened from above and are not able to touch a flat surface while rotating		N/A
	Not possible to touch the blades with the end of the test rod (diameter 8 mm) and checked by inspection		N/A
20.103	Biased-off switch of hand-held blenders recessed or otherwise guarded: Test with a cylindrical rod having a diameter of 40 mm and hemispherical end: appliance does not operate.		N/A
20.104	Not possible to operate the cutting blades of blenders, other than hand-held blenders, while they are accessible: test with test finger specified for blender.		N/A
20.105	Centrifugal juicers		N/A
	- lids and covers doe not open due to vibration		N/A
	- rotating parts adequately secured against becoming loose during operation		N/A
	- If speed of rotating parts >5000rev/min: lids and covers can only be closed after removal of tools		N/A
	- teeth of grating disks do not exceed 1,5mm in height		N/A
	- throw-out cogs do not project more than 4mm		N/A
	- feed pusher provided, of a size that fills the throat of the hopper		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- lids and covers do not open by force test of 5N		N/A
20.106	For appliances having a feed screw: - the maximum cross-sectional dimension of the hopper not exceed 45 mm.		N/A
	- A feed pusher that fills the throat of the hopper is provided		N/A
20.107	Slicing machines, other than fixed appliances and those having a biased-off switch, incorporate means to hold the appliance in place and allow it to be released after use: no move on glass plate when subjected to test as specified.		N/A
20.108	slicing machines:		N/A
	- provided with a guard surrounding the knife and its edge		N/A
	- guard opening as small as permitted by effective use		N/A
	- edge of knife guarded as shown in Fig.101		N/A
	- angle 75 ,		N/A
	- or 90 , if compliance with required condition fulfilled		N/A
	- radial distance "a" (mm): 2mm ("b" =0), or 3mm		N/A
	- edge of the knife protected from the outlet side, relevant distances (mm) 6mm and 5mm respectively		N/A
	- additional guard provided if slices thicker than 15mm allowed		N/A
	- sliding feed table adequately designed (f_30mm, d 5mm, thumb guard projects radially by at least 8mm beyond the blades		N/A
	- piece holder enables small pieces to be sliced		N/A
	- dimensions of spikes or similar as specified		N/A
	- support of sliding table not usable for supplying food without the table in position; verified dash Nos.		N/A
20.109	Slicing machines constructed so that accidental operation of the appliance is prevented.		N/A
	Actuating member of push-button, toggle, rocker or slide switch recessed and actuated with force at least 2N.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Actuating member of slide switch located so that unintentional actuation is unlikely and actuated with force at least 5N.		N/A
20.110	The cutting blades of bean slicers:		N/A
	- are at least 30 mm from the plane of the inlet opening.		N/A
	- length of the major and minor axis of the inlet and outlet openings not exceed 30 mm and 15 mm		N/A
	- dimensions of outlet openings not limited if compliance with test specified.		N/A
20.111	The rotating parts of graters and shredders: - are secured so that they are not liable to become loose during operation.		N/A
	- a feed pusher shall be provided which fills the throat of the hopper		N/A
20.112	The cutting blade of food processors stopped within 1,5 s after the lid has been opened or removed.		N/A
20.113	The lid interlock of food processors shall be constructed so that accidental operation of the appliances is prevented		N/A
	Lid interlock switches shall be biased-off switches		N/A
	If there is an interlock between the lid and the main switch, the lid shall be locked when the switch is in the on position		N/A
	When the lid is not correctly closed , the switch shall be locked in the off position		N/A
20.114	Access to dangerous moving parts of food processors prevented for all combinations of assembly of detachable parts that allow the motor to operate: comply with test as specified		N/A
20.115	Knives shall incorporate a biased-off switch that is recessed or guarded to prevent accidental operation.		N/A
	Appliance don't operate when applying a cylindrical rod with diameter 40mm to the switch		N/A
20.116	Centrifugal juicers for fruit and vegetables shall be constructed so that parts cannot become disengaged when the appliance is operated at high speed.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Lid removed, appliance supply at rated voltage and highest speed (10 times): no part of appliance disengaged		N/A
	Lid in position, when the speed reaches its maximum value, attempt is made to remove the lid (10 times): no part of appliance disengaged		N/A
20.117	Centrifugal juicers shall withstand the stresses resulting from parts rotating at high speed		N/A
	Compliance is checked by the following test which is carried out on three new appliance)		N/A
	Or by testing the sieve in accordance with Annex AA.		N/A
	The rim of plastic material retaining the rotating sieve is cut		N/A
	If the sieve retains its structure, the rim is cut further and the test repeated until disintegration takes place		N/A
	During the test, parts shall not be ejected from the appliance.		N/A
20.118	The operation of cordless appliances incorporating cutting blades that are accessible to test probe B of IEC 61032 shall require two separate movements unless the control device is not directly accessible to the probe.		N/A
	Compliance is checked by inspection and by manual test.		N/A
20.119	The bowl and cutting blades of food blenders and hand-held blenders shall have adequate mechanical strength.		N/A
	Compliance is checked by the specified test.		N/A
25.5	Type Z attachment allowed for :		N/A
	- can openers		N/A
	- coffee mills and grain grinders having a mass not exceeding 1.5 kg		N/A
	- cream whippers		N/A
	- egg beaters		N/A
	- ice-cream machines including those for use in refrigerators and freezers		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- knife sharpeners		N/A

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APPENDIX 5: Photos document

Over view

Top view

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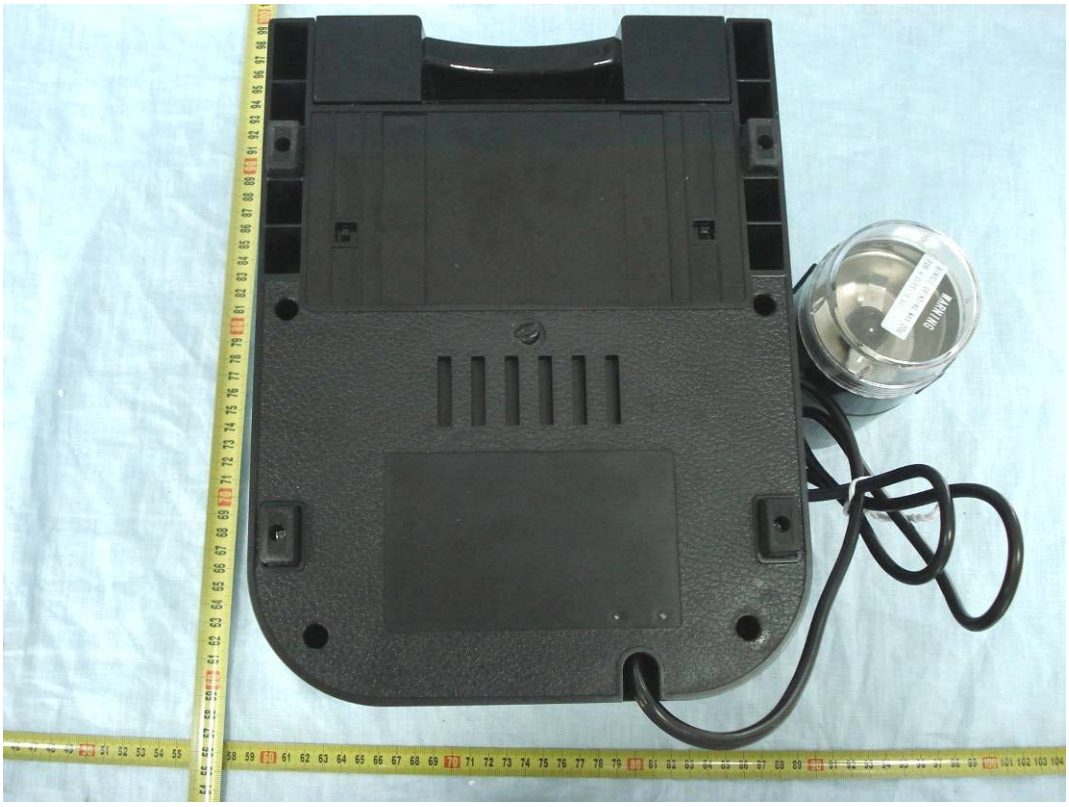
Side view

Bottom view



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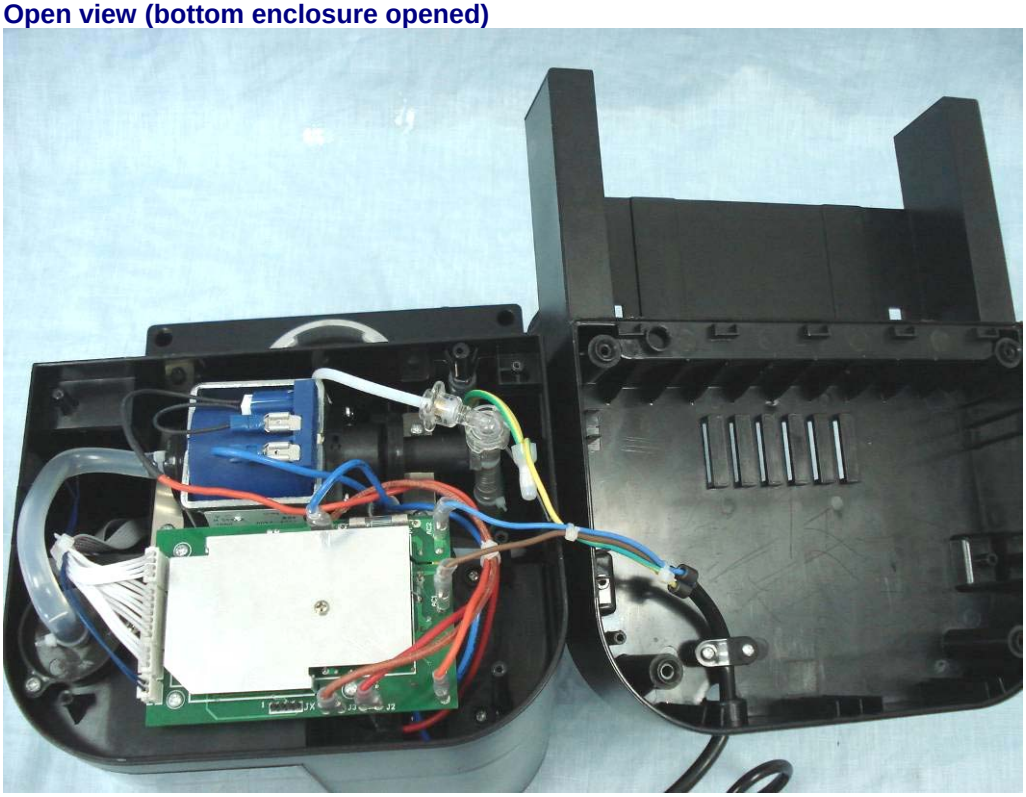
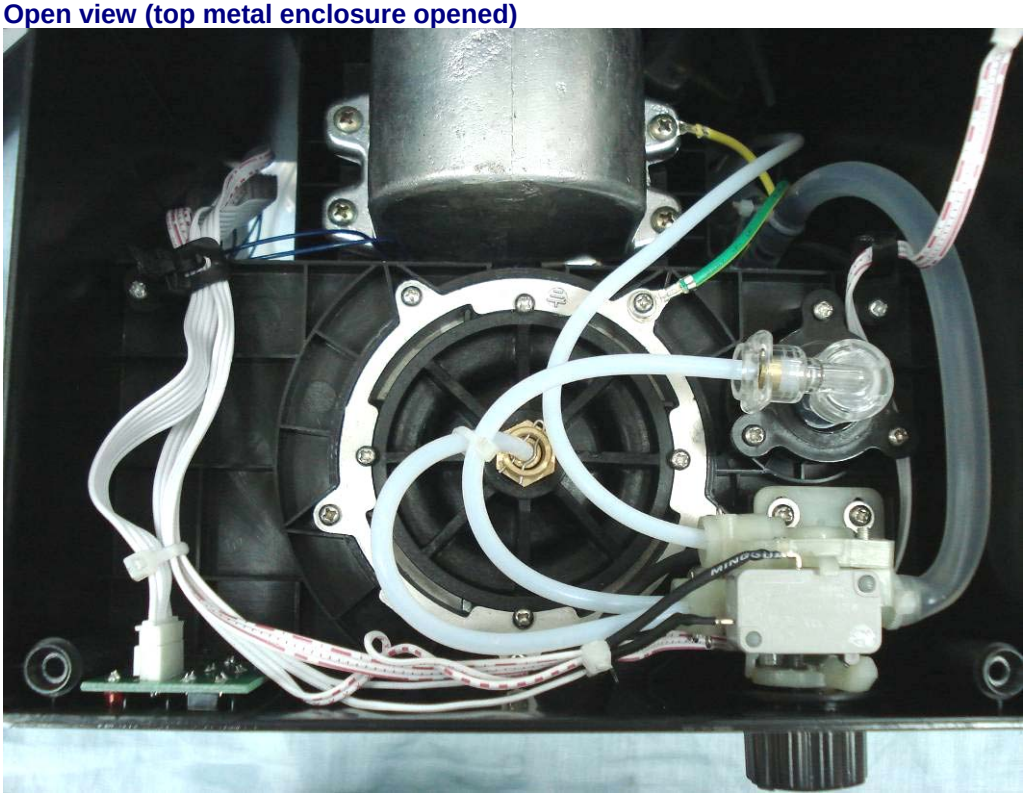
Open view (bottom enclosure opened)



Open view (top metal enclosure opened)



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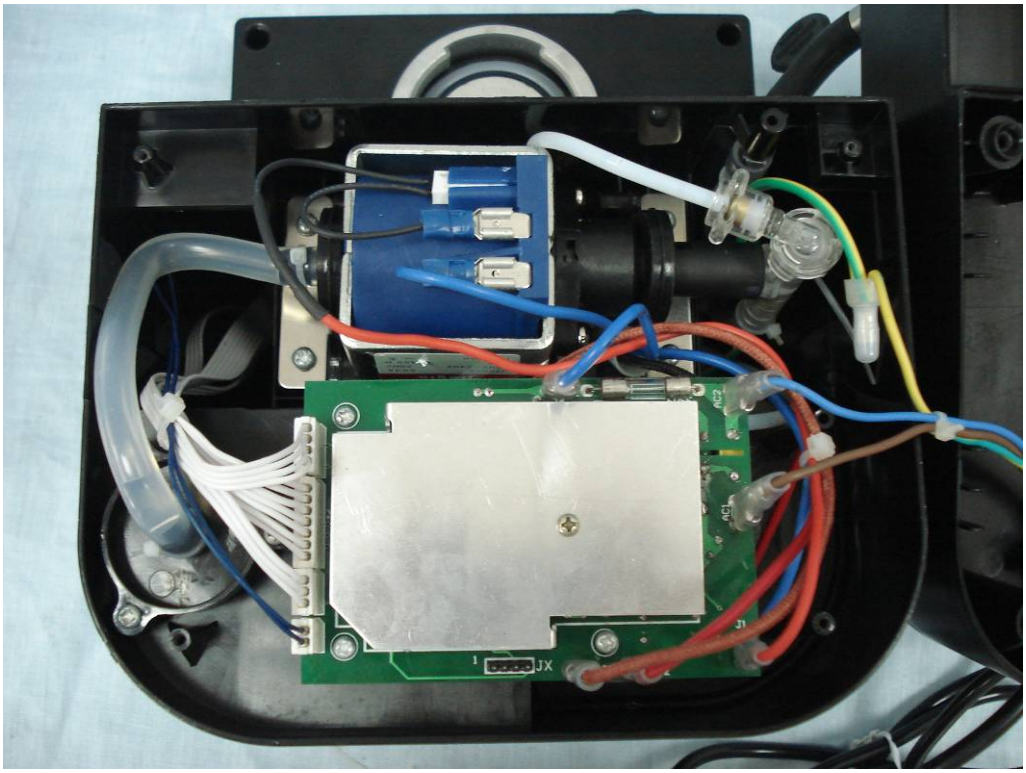
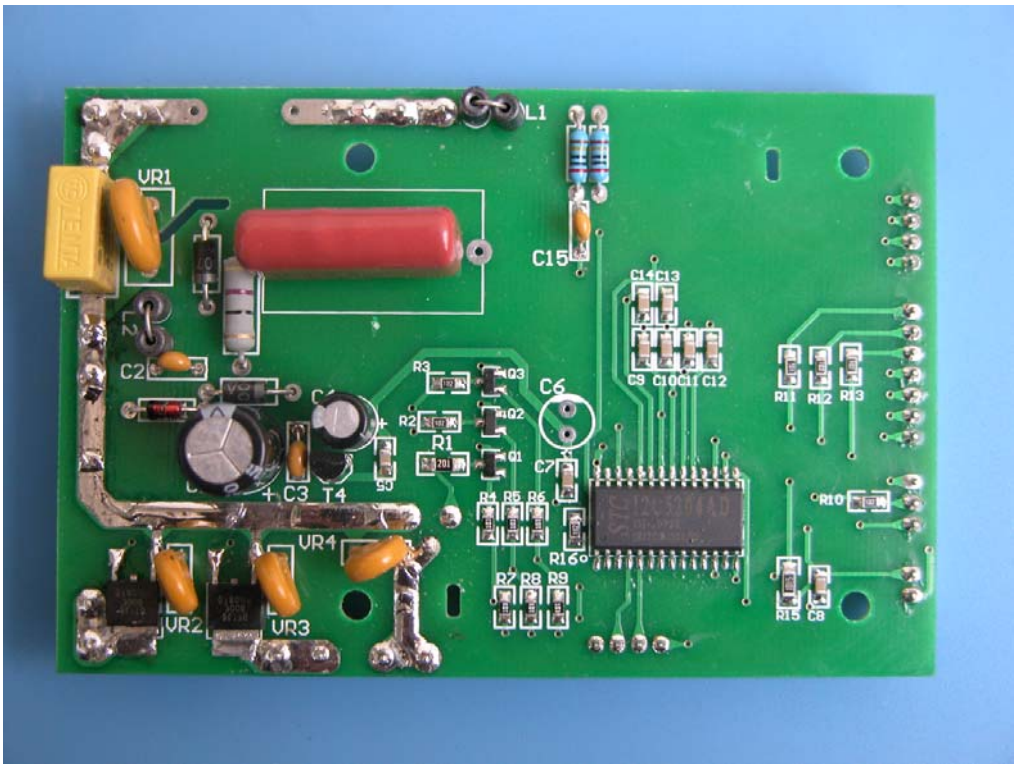
Open view(placement of water pump and PCB)



Details (PCB)



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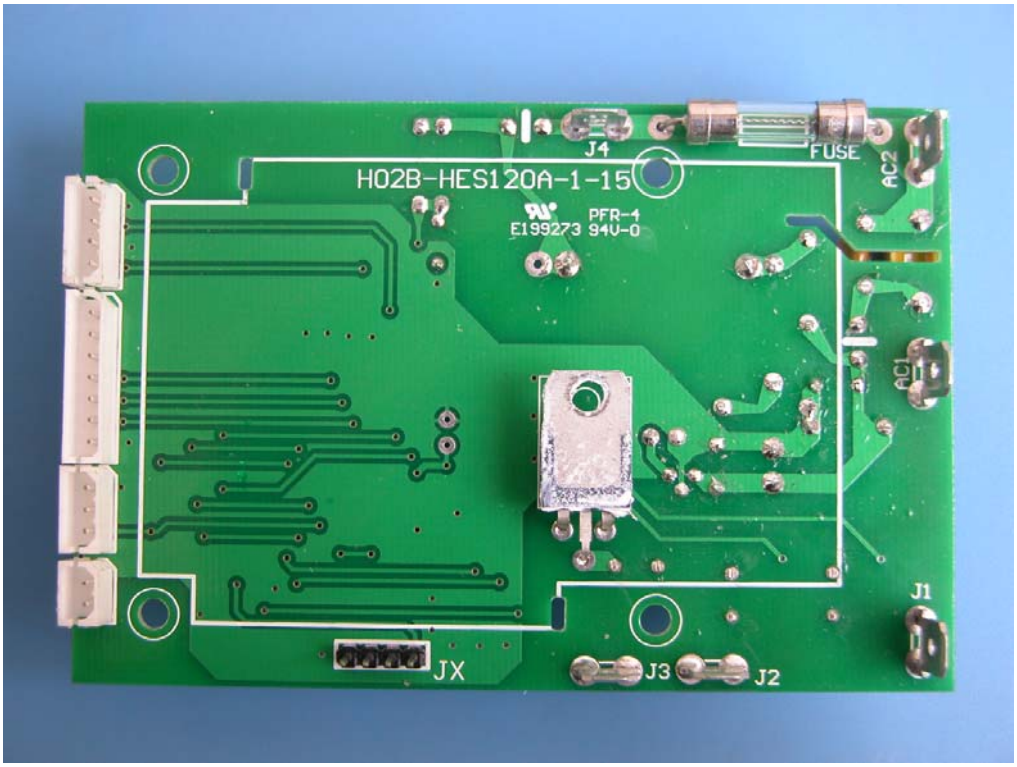
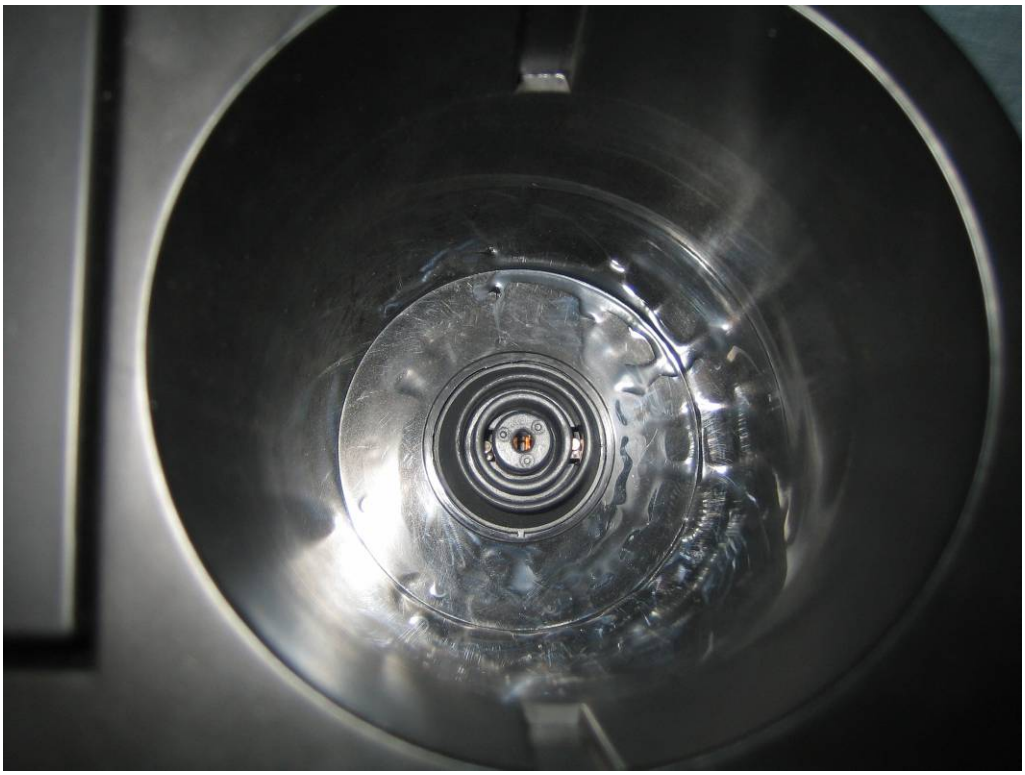
Details (PCB)



Details (cordless interface for coffee mill within the coffee maker)



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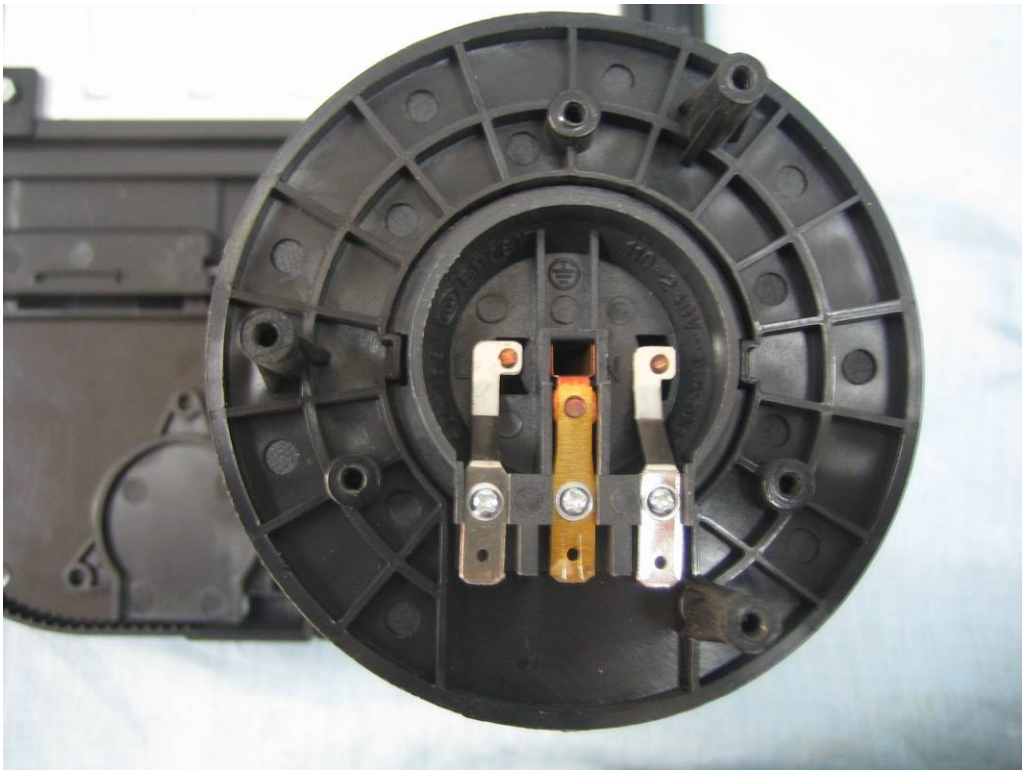
Open view (cordless interface for coffee mill within the coffee maker)



Overview of coffee mill

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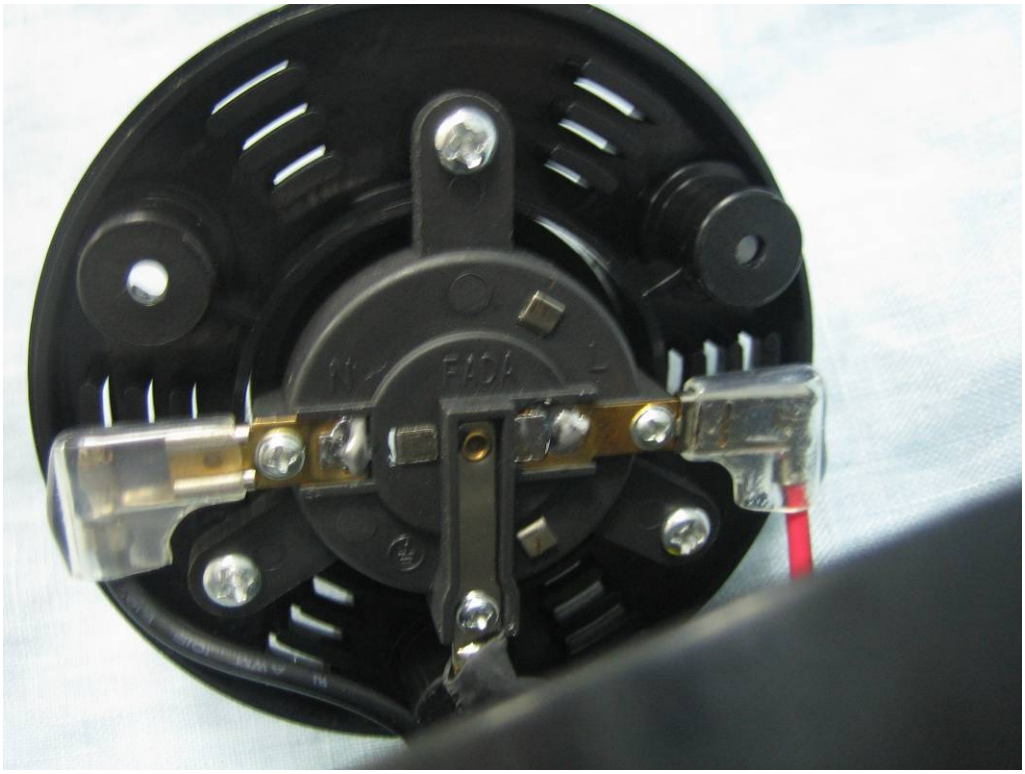
Bottom view of coffee mill

Open view of coffee mill(the bottom of enclosure opened)



Nemko

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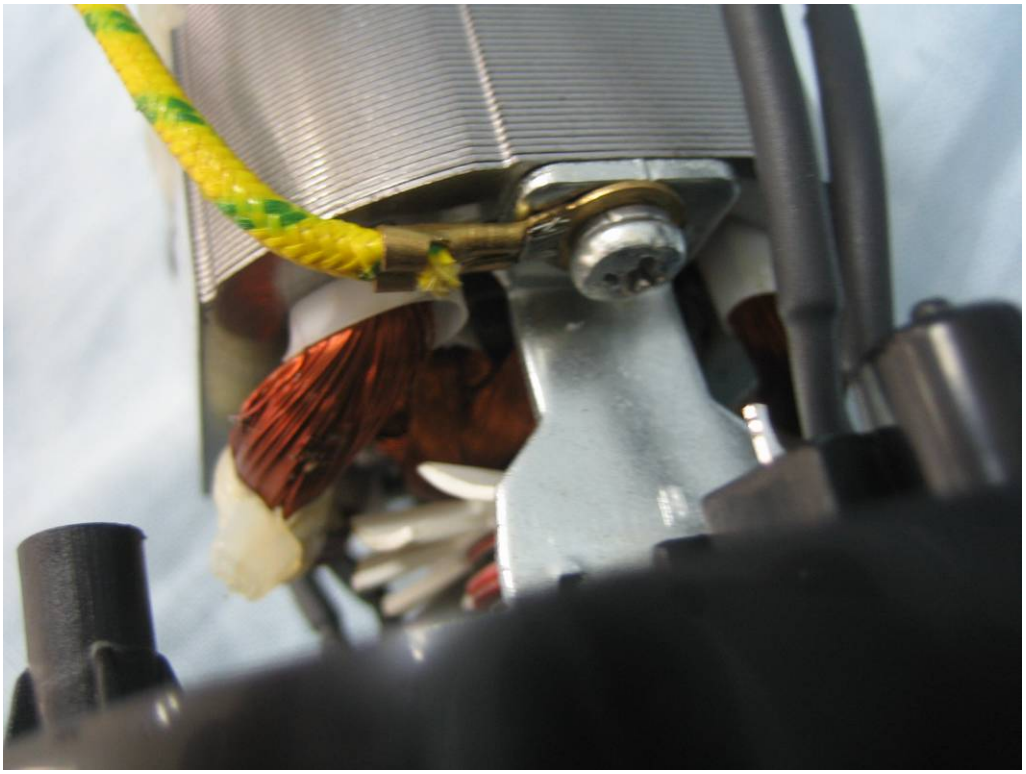
Open view of coffee mill

Earthing connection on the motor of coffee mill



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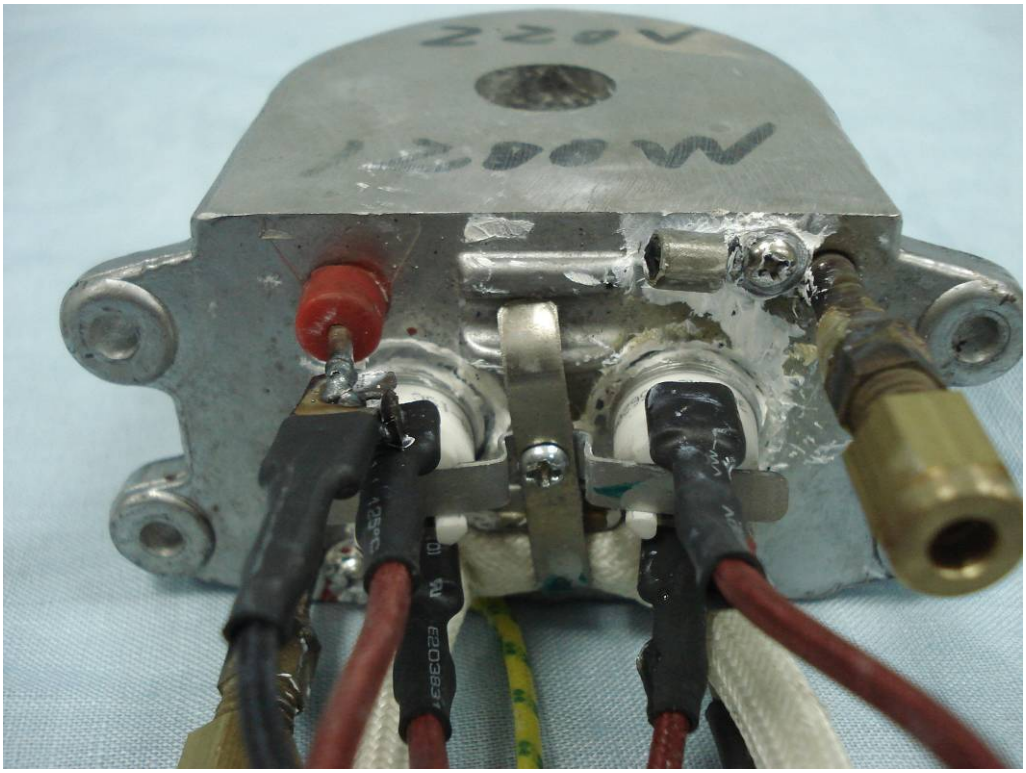
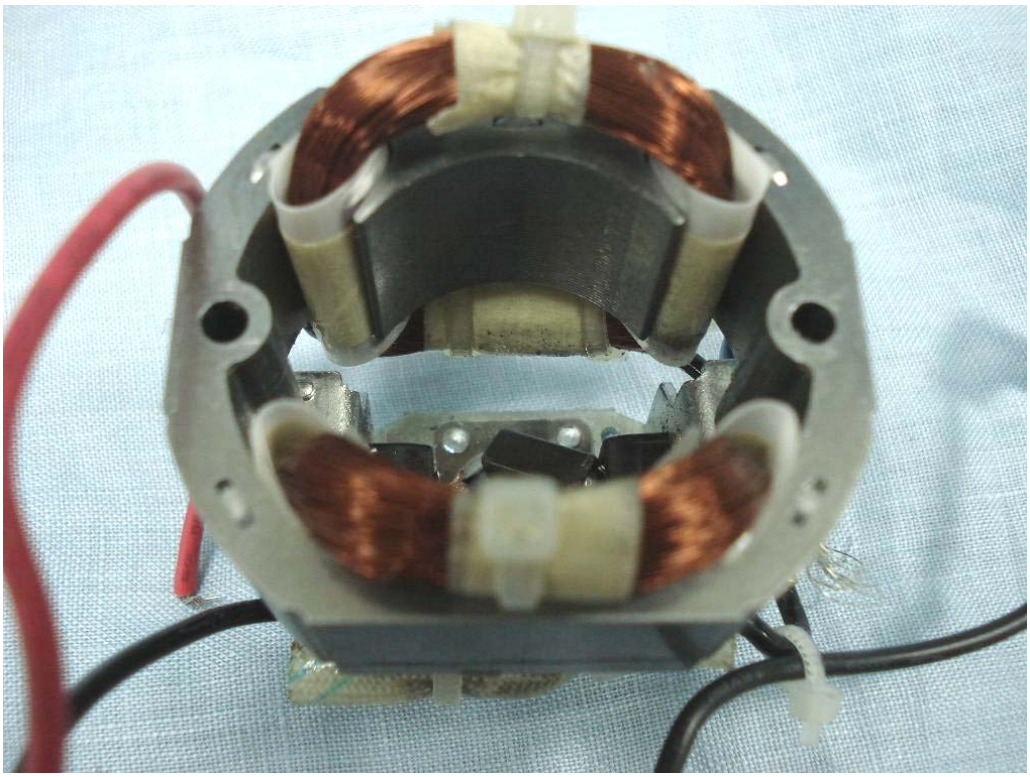
Water boiler



Stator of the motor of coffee mill



Nemko

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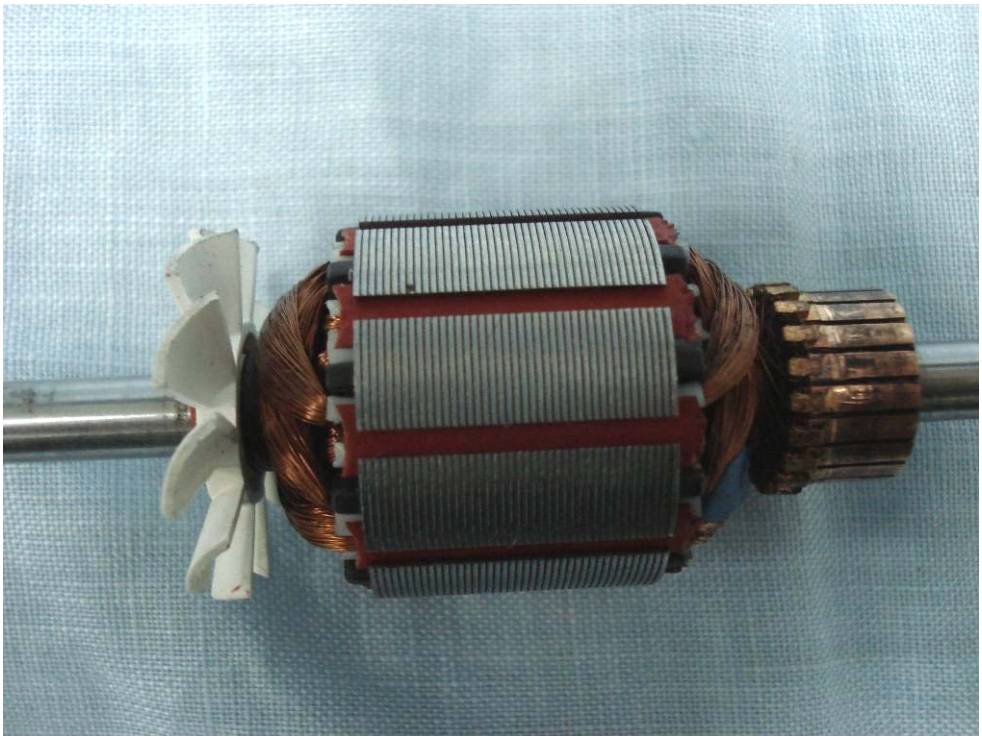
Rotor of the motor of coffee mill



----------End of test report----------